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Professional Competencies Needed by Extension Agents in the Louisiana Cooperative Extension Service.

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PROFESSIONAL COMPETENCIES NEEDED BY EXTENSION AGENTS IN THE LOUISIANA COOPERATIVE EXTENSION SERVICE

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By
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DEDICATION

This manuscript is dedicated to my wife, Lori, and children, Emily, Tripp, and Nicholas, whose opulent patience, support and understanding was constantly tested in my endeavor to finish my graduate program. If we can get through this, we can get through anything. My love and thanks always.

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ABSTRACT

The purpose of this study was to identify the professional competencies needed by Cooperative Extension agents in Louisiana as perceived by extension agents. Additional purposes of the study were to identify when the respondents believed the identified competencies should be acquired and to describe the responding agents with regard to selected demographic variables.

One-hundred forty-one professional competency items were included in a questionnaire that was divided into two parts. The competencies were divided into nine categories that were designed to measure participants' perceptions as to the importance of need for the competencies by extension agents. A five-point Likert-type scale was used. The second part of the questionnaire related to the perceived time of acquisition of each of the competencies. The four possible responses were: before entering the job; during further formal education; Cooperative Extension Service In-Service; and on the job. Demographic data collected included: age; highest attained educational level; undergraduate major; if they had previous 4-H experience and if so, how many years; total number of years employment with the Cooperative Extension Service; and major area of assigned responsibility.

The population for this study consisted of 292 extension agents currently employed by the Louisiana Cooperative Extension Service with more than one year experience. A minimum random sample of 126 participants was drawn with a two percent margin of error.

The majority of the competency items (77.3 percent) were rated as having high importance. The remaining competency items were rated moderate importance (9.9 percent) and very high importance (12.8 percent).

The mean age for respondents in this study was 40.9 years. Master's degrees were held by 71.7 percent of the respondents and the most common undergraduate major was Home Economics. The most common major area of assignment was 4-H (48.2 percent).

The primary choice of time of acquisition of the competencies was on the job (77.9 percent). An educational content outline was also developed for each of the levels of competency acquisition.

CHAPTER 1

BACKGROUND AND NEED FOR STUDY

Introduction

Probably the most important piece of legislation that dealt with agricultural extension as well as the most important piece of social legislation in the history of the United States was the 1862 Morrill Act (Boyle, 1977). The Morrill Act not only established the Land-Grant Colleges, it also fostered the idea that education should be made available to everyone.

In 1914, the Smith-Lever Act established the Cooperative Extension Service. This was established as a partnership between the U.S. Department of Agriculture, the Land-Grant Colleges and county governments. The original legislation specified that "Extension is to disseminate and encourage the application of useful and practical information relating to agriculture, home economics, and related subjects among the people of the United States not enrolled in land-grant colleges" (Warner & Christenson, 1984, pp. 6-7).

In 1980, the results of an Evaluation of the Economic and Social Consequences of Cooperative Extension Programs identified the county agent as the fundamental strength of the Extension system. Originally, the role of the extension agent consisted of primarily demonstrating new practices. Dramatic changes in the role of the Cooperative Extension Service were acknowledged in the late 1970s (Sappington et al., 1977). Since that time, computers, expanded clientele, and new programs have been added to the existing Extension programs. These changes have caused a diversification of subject matter, requiring the county Extension staff to be acquainted with more subject matter and at greater levels of sophistication (Warner & Christenson, 1984). Often, these greater levels of sophistication and subject matter are beyond what the county staff are able to provide, causing the agents to look more and more to the specialists at the Land-Grant Universities for assistance and information. DeMarco (1980) concluded that "The county staff may be becoming more important to the process of information transfer and education than they are to the actual content" (p. 23). For the Extension Service to remain a viable

and effective organization, the staff must be competent and able to keep up with the constant change that is facing the Extension Service. Gonzalez (1982) stated that "historically, the educational philosophy (of the Extension program) has been to establish curricula which provide only for the acquisition of cognitive knowledge. Mastery of the knowledge alone, however, does not insure that the individual can successfully apply what he or she has learned. The agents must develop the proper skills, knowledge, abilities, and attitudes (competencies) necessary to effectively carry out the role of the county extension agent as a result of either the preservice and/or graduate program and work experience" (p. 5).

Several studies have dealt with training needs of county extension agents (Brahee, 1989; Hazelman, 1988; Norman, 1988; Rennekamp, 1987; Williams, 1984), media competencies needed by extension agents (Adamcin, 1984), self-perceived needs of extension home economists (Paige, 1985), professional competencies needed by extension agents overseas (Easter, 1985), perceived competencies of newly employed county agricultural extension agents (Sendeu & Gartin, 1985), and the professional competencies needed by beginning Cooperative Extension agricultural agents (Keita, 1987). Even though several of these studies have addressed competencies, they were all from the perspective of training needs or competencies within a narrow area of investigation.

A 1979 study dealing with competencies needed by extension agents in the Florida Cooperative Extension Service (Beeman, Cheek, McGhee, & Grygotis, 1979) served as a foundation for a subsequent study that dealt with the professional competencies needed by Extension agents in the Pennsylvania Cooperative Extension Service (Gonzalez, 1982).

Several studies have been conducted in Louisiana dealing with inservice education need of county agents in subject matter areas (Verma, 1971; Gassie, 1975). However, there have been no studies in Louisiana to identify the professional competencies needed by extension agents. There are several reasons for such a study.

First, the studies by Beeman et al. (1979) and Gonzalez (1982) were conducted over 10 years ago. Because of the vast amount of changes that society and technology have undergone over the last

10 years, it is imperative that more current information be obtained to make educated decisions concerning hiring, curricula, and training.

The second reason for a study is that many state Extension services are organized differently. In some states the 4-H program is primarily in-school clubs while other states rely on community-based clubs. Many states hire beginning agents in the position of 4-H agents believing that they will move into other areas (agriculture, home economics, horticulture, etc.) when the positions become available. Other states hire beginning agents specifically to work in 4-H, agriculture, home economics, energy, or horticulture. These differences evidence the need for studies based in the states that will be using the results to make decisions.

The third reason is the change in the role of the extension agent over the last 10 years. Added clientele, varied programs, differing audiences, diversification of subject matter, all require different competencies. New studies are required in order to better prepare beginning agents for the roles that they will assume when hired by the Extension Service.

The fourth reason for a study in Louisiana is that according to the findings of a 1971 study (Goyen) the youth agent's concept of their role differed among states. These differences led Goyen to state that "The differences in orientation of agents among these states points out a limitation in generalizing about this research" (p. 23).

For these reasons, there exists a need for this study in order to provide the research basis to properly document the professional competencies needed by extension agents in the Louisiana Cooperative Extension Service so as to provide the foundation for developing and updating educational programs, curricula, and opportunities for extension agents in Louisiana.

Purpose of the Study

The primary purpose of this study was to identify the professional competencies needed by Cooperative Extension agents in Louisiana. Additional purposes of the study were to identify when the

competencies should be learned by the extension agent and to describe the extension agents relative to certain demographic variables.

The objectives of the study were to:

1. identify the professional competencies needed by extension agents of the Louisiana Cooperative Extension Service as perceived by extension agents with a minimum of one year experience.
2. describe extension agents of the Louisiana Cooperative Extension service with regard to age, highest attained educational level, undergraduate major, number of years as a 4-H member, total number of years employed by the Cooperative Extension Service an major area of assigned responsibility.
3. identify at what time (i.e., before entering the job, during further formal education, Cooperative Extension Service in-service or On the job) these professional competencies should be acquired as perceived by extension agents of the Louisiana Cooperative Extension Service.
4. determine the importance of professional competency factors (categories) as perceived by extension agents of the Louisiana Cooperative Extension service. Professional competency factors as used in this study include:

    Administration;

    Program Planning;

    Program Execution;

    Teaching;

    Communication;

    Understanding Human Behavior;

    Maintaining Professionalism;

Evaluation;

4-H Youth

5. Develop a proposed educational content outline for each of the following levels (times) of competency acquisition:

Before Entering the Job;

During Further Formal Education;

Cooperative Extension Service (CES) In-Service;

On the Job

Definition of Terms

For the purpose of this study, the following terms were operationally defined:

Extension Agents - Extension agents were those persons employed as parish or area agents by the Louisiana Cooperative Extension Service. These agents develop and administer, with the assistance of volunteer leaders, a nonformal educational program which embraces the areas of agriculture and natural resources, energy work, community and leadership development, nutrition, home economics, and 4-H youth development.

Beginning Extension Agent - A beginning agent was any person with one to five years employment in the Louisiana Cooperative Extension service who was still employed as of February, 1993 at the parish or area level.

Experienced Extension Agent - An experienced agent was any person with more than five years employment in the Louisiana Cooperative Extension service and who was still employed as of February, 1993 at the parish or area level.

Professional Competencies - Those skills, knowledge, abilities, and attitudes extension agents should possess to adequately perform their roles as extension agents, excluding technical competencies. The terms professional competency and competency are used as synonyms in this study.

CHAPTER 2

REVIEW OF RELATED LITERATURE

Early History of Extension

In 1914 the Smith-Lever Act created the Extension Service. It was created as a third branch of the land-grant system with the purpose of transmitting information to people at the local level from the United States Department of Agriculture and state land-grant colleges.

From its start until the 1930s, Extension was the primary agency representing the United States Department of Agriculture in local communities (Warner and Christenson, 1984), and as such focused largely on agriculture and home economics (Gonzalez, 1982). During the depression, agencies such as the Soil Conservation Service, the Rural Electrification Administration and the Farm Security Administration came into being in an effort to provide specific services to farm and rural residents. These agencies were established at the local level largely through the organizational efforts of Extension (Ballew et al., 1976).

"In its early history, Cooperative Extension's role appeared straightforward and limited. Extension was the organization best equipped to attack informal educational problems of production agriculture and rural living. There was a close interrelationship of farmers and rural residents with Extension" (Hildreth and Armbruster, 1981).

Rapid technological advancements in the 1940s and 1950s coupled with a substantial reduction in the size of the farm and in rural populations, and changes in society in general, shifted the concerns of Extension toward the problems of urban residents, low-income persons, and minority groups in the 1960's. These changes also broadened the clientele of Extension, due in part to Extension's response to federal directives that earmarked funds toward non-traditional audiences (Warner and Armbruster, 1981).

Recent legislation has expanded Extension's role even more. Areas such as energy, nutrition, latch-key children, horticulture and rural development have been added to existing programs. Many times, these programs have been added to existing programs without ousting other programs. This

typifies one of Extension's strengths that has enabled it to survive throughout the years, namely flexibility.

With these changes in Extension clientele and programs came changes in the role of the Extension agent. In Extension's early years, method demonstrations, train exhibits, fairs, shows, and other informal methods became the keystones in the accepted patterns of Cooperative Extension teaching (Collings and Sanders, 1966). Now, however, county Extension staff need to be knowledgeable of a greater array of subject matter with a higher degree of sophistication (Warner and Christenson, 1984).

The importance of the Extension agent has been evidenced many times. The county agent has been identified as the fundamental strength of the Extension program according to a report that was based on an Evaluation of the Economic and Social Consequences of Cooperative Extension Programs (1980). The importance of the extension agent was probably best stated by the Food and Agriculture Organization of the United Nations Guide to Extension Training, (Oakley and Garforth, 1985), which states "The whole extension process is dependent upon the extension agent, who is the critical element in all extension activities. If the extension agent is not able to respond to a given situation and function effectively, it does not matter how imaginative the extension approach is or how impressive the supply of inputs and resources for extension work. Indeed, the effectiveness of the extension agent can often determine the success or failure of an extension programme" (p. 91).

Early Extension Training Programs

From the inception of the Extension Service, the importance of training was realized. A letter from Dr. Booker T. Washington to Dr. Bradford Knapp (January, 1914) who at that time was working for the United States Department of Agriculture as Special Agent in Charge of Demonstration Work, proposed that specially selected, post-graduate students at Tuskegee Institute be given an intensive training period of about three months, coupled with practical work, to prepare them for an Extension agent position (Collings and Sanders, 1966).

During 1915 and 1916, agents not only had to have a broad training in agriculture, but they were expected to function as organizers also. The broad requirements of agents during this time caused state leaders to seek better trained individuals to fill vacancies and new positions in county work. Efforts were made to bring those agents already employed into closer contact with the colleges through the use of conferences held at the institutions. At this time also, regional and national conferences began to be held to address new problems that arose in the agents' work (True, 1928).

Following World War I, regional committees of the Land-Grant College Association planned training based on the growing needs of an increasing number of staff. Special courses were planned based on a survey designed to determine opinions on whether courses offered should be at the undergraduate or postgraduate level. The University of Wisconsin began offering graduate courses in Extension methods in 1929 and, by 1937, nine institutions were offering three-week graduate courses designed to meet the needs of county extension agents (Collings and Sanders, 1966).

In order to avoid too great an expansion, the Extension Committee on Organization appointed a committee that reduced the number of special Extension schools to four regional Extension summer schools in 1946. These schools were located at Colorado A&M, Cornell University, the University of Arkansas, and the University of Wisconsin. These schools solidly established extension workers as educators and the birth of Extension Education occurred (Collings and Sanders, 1966).

In 1948, the Department of Agriculture published the results of a study that was designed to investigate and make recommendations on the programs, policies, and goals of the Cooperative Extension Service. In the study, it was stated that "Extension work today demands an educational background especially designed to fit workers for the profession. The basic philosophy should be to have Extension workers as well trained as possible in broad fundamentals during their undergraduate work, and to develop them into well qualified, technical persons by in-service training after they are employed. When workers are first employed, induction training is essential. This should be followed throughout the

workers' careers by continuous in-service training (Joint Committee Report on Extension Programs, Policies, and Goals, 1948, pp. 42-44).

Twenty-three state Extension graduate programs in Extension education were offered by 1962. Thirty-five institutions offered undergraduate courses in Extension education (Collings and Sanders, 1966). In 1963, Dr. E. T. York, who was serving as Federal Extension Administrator, said during the annual staff conference of the Federal Extension Service that "I would say that our professional leadership is challenged from two standpoints. First, we are challenged to adjust and reorient our programs so that we are better serving the needs of commercial agriculture and rural people - our traditional clientele. But then we are also challenged to point the way to means by which this unique and distinctive form of education might serve the needs of other segments of society as well (York, 1963, p. 6)." One of the implications that these challenges raise is that of what are to be the competency requirements that are needed to meet the needs of a clientele whose needs are also changing and expanding.

Competency Studies in Extension

A study in 1980 measured the relationship of selected characteristics of newly hired county Extension agents in seven northcentral states and their perceived orientation needs (Jahi, 1980). Sixty-two items of orientation training were obtained from the literature. These needs were grouped into 13 areas of training that were developed by Jenkins in 1975. Results of the study showed that the perceived training needs of newly hired agents ranged from some training needed to much training needed, and the perceived importance of the agents in the same training areas varied from some importance to important.

As early as the 1920s and 1930s, some studies were conducted to determine training needs of extension personnel. However, it was not until the 1960s that researchers began a major effort in looking at the professional competencies that were needed by extension agents at that time.

In 1960, Price surveyed Arkansas Cooperative Extension agents in an effort to identify competencies that were needed. Two-hundred forty-one agents were sent a survey questionnaire that was made up of nine performance areas. Price then stratified the results of the questionnaire according to the

agents' tenure, classification of job responsibility, and evaluation records. These areas were also divided into three areas of concern which included the importance of these competencies to the agents' job, the agents' educational needs, and the agents' interest in graduate study. It was found that of the respondents, 80% or more found the following ten areas to be important:

1. the ability to analyze the county situation;
2. the ability to develop one's own leadership abilities;
3. the ability to identify leadership in the county;
4. the ability to organize effective program planning committees;
5. the ability to involve lay people in program development;
6. the ability to develop a long-term extension program;
7. the ability to identify problems and their priorities;
8. the ability to conduct effective farm and home visits;
9. the ability to use teaching methods effectively;
10. the ability to understand the duties and responsibilities of the extension agent at the county level.

Jones (1964) identified job activities of the Kansas Extension Service through the use of activity records that were kept by each member of the extension service. From those records, tasks for each job position were then categorized into three areas: location in the organizational structure; major duties and qualifications; and nature and purpose of work. Once categorized, these tasks were then assembled into a reference book for the State's extension service and contained activities for the positions of Director, Associate Director, Administrative Assistant, Assistant Director, State Leaders, Department Heads, Extension Specialists, District Agents, and County Extension Agents.

Moore and Quinn (1967) measured the perceptions of North Carolina 4-H extension agents relative to the difficulties that they encountered in their work in community 4-H clubs, and the training opportunities relative to that role. The researchers utilized a questionnaire that was comprised of 37 tasks and divided into three phases; planning (11 tasks); execution (16 tasks); and evaluation (10 tasks). The

greatest diversity was found for level of difficulty involving evaluation tasks, however the majority of agents reported some difficulty in each of the three phases.

The researchers collected additional data with regard to agent characteristics and perceptions and compared it to the difficulties encountered by these agents. Differences were found relative to age, percentage of time devoted to 4-H club work, length of tenure, and consideration of 4-H work as a major responsibility.

There were three studies conducted in 1968 that used the critical incidents technique to determine selected needs and requirements of extension agents. In one of these studies, Kohl (1968) attempted to determine behavioral requirements extension agents in Idaho needed and at the same time, study situational requirements that were related to the critical incidents. The factors that Kohl studied included: most important subject content (social, technological, or combination); initiator of action (agent, others, or failure of agent to take action); most important contact between agent and others (individual, group, or mass audience); and social system with which the agent was involved.

The incidents were collected and 975 critical behaviors were assessed. These 975 critical behaviors were then categorized into 58 critical job requirements. In this way, the behaviors and job requirements described the critical needs of agents in performing their job. Kohl found that the most effective agent performance was found when a combination of social and technical skills were necessary in a particular situation, and when a socially-structured situation existed. It was also found to be true when the agent rather than others initiated the action. From this study, Kohl (1968) stated that the evidence suggested that effectiveness of a worker may be influenced by the tangibility of the subject area with which he deals.

McCormick, Cunningham, and Bender (1968) also used the critical incident technique in Ohio to identify major communication concepts needed by cooperative extension and vocational agriculture educators. Twenty-seven communication concepts were presented to cooperative extension and vocational agriculture educators in graduate and in-service training programs who then evaluated relevance to

intellectual behavior. Based on the findings of the study, the researchers reported several suggestions for adult educators. Included in the suggestions were: understand communication as a dynamic process; understand the importance of the concepts of communication in introducing educational change in agriculture; and increase the ability to evaluate the effectiveness of communication or the use of communication procedures.

Another study that used the critical incident technique in 1968 was a one conducted by Peabody (1968). In this study, Peabody also included six performance areas in an effort to determine training needs of extension service personnel. The sample included 74 Michigan extension agents from which 444 critical incidents were obtained. Of the incidents reported by the extension agents, over 98 percent were categorized into six groups. Agents then ranked these six groups in order of importance as follows: organizing groups; conducting programs; program planning; evaluating programs; teaching and communication; and administration. Results were also reported for frequency and difficulty of performance.

Clifton (1969) used the critical incident technique to study North Carolina extension agents. Two-hundred four agents participated in the study that used a role model to evaluate the 402 critical incidents that the researcher received. From this, the incidents were categorized into three groups; planning (243 incidents); execution (153 incidents); and evaluation (six incidents). This study showed that for the agents that participated in the study, most considered planning or execution to be more important than evaluation.

Findlay (1969a) used the critical incident technique and grouped 419 critical incidents received from 211 New York extension agents into four main areas: systems growth and development; planned change and development; management of change and development; and influencing adoption and innovation. This study used the four areas and concepts under each area as a series of models of critical functions and processes that were to be used as teaching objectives in an extension education program.

Findlay (1969b) again used the critical incident technique, this time grouping identified behaviors necessary for an extension agent into seven categories. These seven categories were: preconditioned or set behavior; programming; mobilizing resources and facilitating action; coordinating action to administer agency programs and activities; providing voluntary leadership; influencing clientele evaluations and adoption of innovations; and regulating programs and activities. The concepts that were related to these behavior categories were identified. They included the system and its growth and development; and influencing the evaluation and adoption of innovations. The information from this study was intended to be used to develop a curriculum for training extension agents.

Clifton (1969) conducted survey research in Texas to determine the needs of beginning county agents for in-service training. Eighty-six Texas county extension agents that were employed in 1966 or 1967 and were still employed in January of 1969 were surveyed using an instrument that consisted of 27 competencies that were divided into six broad areas: cooperative extension service; program development; the educational process; social systems; communication; and technology. Data collected from male and female agents were analyzed separately and three different research methods were compared. Participants in the study were asked to indicate their degree of understanding of the competency at the time of employment in the cooperative extension service. The second method consisted of analysis of college transcripts and made use of two instruments which totaled hours of course work under 24 designated subject areas which were then related to six competencies. The third method used was the supervisor's job performance rating. The instrument asked the supervisor to designate the agent's performance in various competency areas using a five-point Likert-type scale. It was concluded that the agent survey was the most effective in determining the needs of beginning Texas county extension agents for in-service training. All 27 competencies were determined necessary for all agents to be able to perform by the end of their first year of employment.

Soobitsky and Cunningham (1971) used a questionnaire to survey agents from 12 northeastern states to study the training needs of urban 4-H agents, specifically those working with disadvantaged

clientele. Most of the participants in this study were younger than 35 and had been employed for less than five years. The results of the study which asked agents to respond to nine areas of competency, showed that the majority of agents perceived the headings under the areas of effective thinking and technical knowledge to be of equal importance to their job followed in importance by both social systems and program planning and development.

In 1972, the needs of beginning extension agents in Colorado were included by Richardson and Eckard (1972) in "A Guide to Success in Extension for New Extension Employees." The categories in this guide were similar to those in other studies and included: extension organization, position, job, duties, and roles; program development process; and professional competence and improvement opportunities. Also in 1972, first year county extension agents in Texas were the focus of a handbook that included a section describing the job responsibilities of district agents, trainer agents, training teams, and trainees in the training program (Hutchinson, 1972).

Mick, Paisley, Paisley, Coulson, Hull, Sanderson, Seider, and Wanger (1973) used personnel functions from existing extension programs to develop models for educational change that emphasized the training of extension personnel for an active rather than a passive dissemination system. Using these models, seven job/role descriptions were developed that were each divided into selection criteria and task and skills/knowledge analyses. The resultant 28 training modules that were developed from the task and skills/knowledge analyses were tested for the various roles identified. The modules were classified into three groups: those that required knowledge common to all trainees; skills for retrieval specialists only; and skills for both project managers and field agents.

Itulya (1973) conducted research to identify the competencies that were essential for beginning agricultural extension agents. These professional competencies provided information that was used for the preparation of agricultural educators in Arizona. The professional competencies that Itulya identified also provided a basis for updating and upgrading extension workers already employed. Primarily, the

same competencies that agricultural agents perceived as essential were also perceived as essential by home economics agents.

Sappington, Brown, Cheatham, Jones, Thompson, Thornhill, and Bonner (1977) developed a questionnaire to determine what competencies were necessary for extension 4-H agents. The researchers used a 30 percent random sample of county, multi-county, and state-level professional staff as well as county chairpersons and volunteer leaders involved in the 4-H program from 43 states and the District of Columbia. A 96 percent return was received. Of an original 157 competency statements, a pilot test and factor analysis reduced the number to 75. These 75 competencies were then grouped into the following categories: administration; communication; staffing; program planning; program execution; teaching; and evaluation. The results were used by the Department of Agricultural and Extension Education at Mississippi State University to modify and revise the curriculum to include the content identified by the research.

Beeman, Cheek, McGhee, and Grygotis (1979) conducted a similar study to identify and verify the professional competencies needed by extension agents in the Florida Cooperative Extension Service. A closed form opinionnaire divided into two sections, one for the county and multi-county staff and the other for state staff, was mailed to 269 subjects identified in the population. Of the 158 competencies identified and studied, extension agents perceived at least 79 percent to be moderate to very high in importance. State staff rated 97 percent of the competencies as moderate to very high in importance. Significant differences were found among agricultural, home economics, and 4-H agents regarding the 4-H competency category. The 4-H agents rated this category of competence much higher in importance than did the other two groups. The researchers recommended that the most essential competencies identified to be included in the graduate and undergraduate curricula in the Department of Agricultural and Extension Education.

Jahi (1981) studied the relationship of selected characteristics of newly hired county extension agents in seven northcentral states and their perceived orientation needs. The researcher obtained the two

dimensions of agents perceived orientation needs from the literature. Sixty-two items of orientation training were used and grouped into 13 training areas. Results of the study showed that the perceived training needs of newly hired agents in 13 areas of orientation training ranged from some training needed to much training needed, and the perceived importance of the agents in the same training areas varied from some importance to important.

Little (1981) conducted a study to determine the perceptions of extension agents, unit chairmen and district staff in Virginia relative to concepts and competencies in extension program development. Six concepts were used as categories for 120 items included in a questionnaire. Perceptions were measured on a five-point Likert-type scale. From the results, it was concluded that there was a consensus of agreement as to the importance of the concepts to extension agents in program development. Also, as the agent or unit chairman's time spent in a given area increased, the more likely they were to perceive similar concepts and competencies to be of less importance to extension agents in extension program development.

Gonzalez (1982) conducted a study to identify and verify the professional competencies needed by extension agents in Pennsylvania and when the competencies should be learned by extension agents. One-hundred forty-four competencies were included in a questionnaire. These competencies were broken into nine categories. These categories were: administration; program planning; program execution; teaching; communication; understanding human behavior; maintaining professionalism; evaluating; and 4-H youth. Eighty-nine extension agents and 27 staff members participated in the study. All of the 144 competencies were rated of moderate importance (3.0) or above. Sixty-one of the 144 competencies were rated by the respondents to be of high importance (4.0 to 4.4) and eight competencies were rated as very high importance (4.5 or above). Of the 144 competencies, the respondents felt that 26 should be learned before entering the job, six during graduate studies, and 112 through in-service and on the job. Almost all of the competencies to be learned before entering the job were in the categories of teaching, communication, and understanding human behavior.

Sendeu (1985) used a survey instrument to assess the professional education competencies of newly employed county agricultural extension agents as perceived by directors of the Cooperative Extension Service in 50 states and 49 presidents of County Extension Agents Associations. Five competency categories were assessed moderately low: extension teaching methods; program planning; leadership development; and program evaluation and administrative duties. Southern region respondents rated competencies of newly employed agents consistently lower than did those in the other three regions. Sendeu concluded that there was a definite need for extensive in-service training for newly employed extension agents. Pre-service training is considered adequate by directors of cooperative extension service and presidents of county extension agent associations.

Keita and Luft (1986) performed a study to identify the professional competencies needed by beginning Cooperative Extension agricultural agents in Minnesota, North Dakota, and South Dakota. They utilized a questionnaire to survey agents on 40 competency statements. They found that most of the competencies were important and needed by beginning agricultural extension agents in Minnesota, North Dakota and South Dakota. They also found that most of the competencies should be developed through training while on the job and during undergraduate programs. No noticeable differences occurred in the perceptions of beginning agents between the three states.

In 1988, a joint effort between Ohio State University and Mississippi State University was funded by Extension Service-USDA to conduct research projects designed to identify and strengthen the body of research and knowledge related to Extension 4-H/Youth Development programs. From this project, five major areas for classifying youth development research and knowledge were synthesized. They were: communication; educational design; youth development; youth program management; and volunteerism. Each of the five areas was incorporated into a 4-H professional research and knowledge taxonomy. The area communication included: interpersonal skills; group skills; verbal skills; presentation skills; written skills; nonverbal skills; listening skills; and information technology. The area educational design contained: institutional framework; needs assessment; program design; program

implementation; and program redirection. Youth development contained: psychological and emotional development of preadolescence, adolescence, and late adolescence; physical development of preadolescence, adolescence, and late adolescence; social-moral development of preadolescence, adolescence, and late adolescence; cognitive development of preadolescence, adolescence, and late adolescence; vocational/career development; current issues and problems; and family relationships. The area youth program management included: administrative planning; organization; human resource management; control and budgeting; marketing; resource development; and recruitment and retention. The final area, volunteerism, included: staffing; supervision; development needs of adult volunteers; and developmental needs of volunteers.

Summary

After reviewing the literature, it becomes apparent that many studies conducted have dealt with identifying, validating and examining the professional competencies needed by extension agents. Only three studies however have dealt with the professional competencies needed by extension agents in the last 18 years. Information regarding the competencies needed by extension agents in Louisiana does not exist.

Boone (1983) professed that a dynamic organization is one that provides opportunities for the continuous self-renewal of members, based on needs, as the organization adjusts its objectives to the changing needs of its publics. For the Cooperative Extension Service to remain a dynamic organization, the training that extension agents, or those wishing to become extension agents, receive needs to be based on up-to-date needs that have been identified as important by those that actually perform the job tasks. For this reason, there exists a need for this study in order to provide the research basis to properly document the professional competencies needed by extension agents in the Louisiana Cooperative Extension Service so as to provide the foundation for developing and updating educational programs, curricula, and opportunities for extension agents in Louisiana.

CHAPTER 3

RESEARCH PROCEDURE

This chapter includes the following sections: population and sample, instrumentation, data collection, and data analysis.

Population and Sample

The population for this study consists of extension agents hired by the Louisiana Cooperative Extension Service and who are still employed according to the Louisiana Cooperative Extension Service Personnel List, February 1993. Utilizing the personnel list, 292 full-time field Cooperative Extension Personnel (94 County Agents, 79 Home Economics Agents, and 40 Area Agents) were employed as of February 1993. Anticipating a 90 percent response rate a minimum sample of 130 was determined with a 2 percent margin of error using Cochran's formula:

$$N_0 = \frac{t^2 s^2}{d^2} = \frac{(1.96)^2(.7)^2}{(.10)^2} = \frac{1.88^2}{.01} = 188$$

$$N = \frac{N_0}{1 + \frac{N_0}{N}} = \frac{188}{1 + \frac{188}{292}} = 115$$

Instrumentation

A closed-form questionnaire was developed to collect the data. Other data collection procedures were considered but disregarded in favor of the closed-form questionnaire. This is due in part to the diverse types of program areas in Louisiana, the population size, and the desire to collect the needed data while requiring the least amount of the respondent's time. This data collection procedure is consistent with those used by similar studies in other states.

After a review of literature, the instrument used in the Florida study (Beeman, et al., 1979) was selected for this study. Cronbach's alphas were used to measure the reliability of Likert-type scales in the Florida study. The Cronbach's coefficient alphas for the competency categories used were reported

by Beeman et al. as follows: program planning, .88; program execution, .80; evaluation, .90 research, .91; communication, .85; administration, .98; understanding human behavior, .92; public relations, .86; teaching, .94; maintaining professionalism, .97; and 4-H, .99.

Gonzalez (1982) took this instrument a step further, added a section for determining when the competency should be learned, and as a result of review procedures, reduced the list of competencies from the Florida study (159) to 144 competency statements. Gonzalez then divided the questionnaire into two sections. The first section consisted of demographic data. The second section was made up of two parts. The first part consisted of competency statements with a five point Likert-type response scale to which numerical values were assigned. The second part related to the time when the competency should be learned with three possible responses; before entering the job; graduate program; or on the job/in-service.

After a review by a panel of experts to establish the content validity of the questionnaire for this study, three questions under the section 4-H Youth dealing with the use of paraprofessionals were removed due to the fact that paraprofessionals are not utilized in Louisiana. A reliability test using Chronbach's alphas for each of the nine categories included on the questionnaire in this study can be seen in Table 1.

Because of recommendations for further study made by Gonzalez, a change in the second part of section two was made. The survey instrument contained four possible responses as to when the competency should be learned instead of three. For this study, on the job/in-service is now considered to be two different answers instead of one answer as in Gonzalez's study.

The demographic variables used to describe respondents consisted of six items: age; highest attained educational level; undergraduate major; if they were a member of 4-H as a youth and if so, how many years; total number of years employed by the Cooperative Extension Service; and major area of assigned responsibility.

Table 1
Reliability for Each of the Nine Categories of Professional Competencies Included on the Questionnaire

	Competency Categories	Number of Items	Alpha
1.	4-H Youth	20	.93
2.	Administration	26	.92
3.	Understanding Human Behavior	11	.92
4.	Evaluation	18	.92
5.	Communication	19	.91
6.	Teaching	20	.88
7.	Program Planning	10	.86
8.	Maintaining Professionalism	5	.80
9.	Program Execution	12	.79
	Overall	141	.98

For each rating scale mentioned, respondents were given specific instructions and explanations to aid them in completing the questionnaire.

Data Collection

Questionnaires were coded numerically so as to provide the researcher with a means to initiate follow-up procedures and also to afford the respondents with anonymity. A cover letter explaining the purpose of the research and soliciting participation by the potential respondents was developed. The coded questionnaires and a self-addressed stamped envelope were mailed to the sample of extension agents selected for this study. A letter was also sent from the Vice-Chancellor and Director of the Louisiana Cooperative Extension Service asking for the cooperation of the agents in the study.

Four weeks after the initial mailing, a follow-up letter was sent to non-respondents along with a coded questionnaire and a stamped self-addressed envelope. Three weeks after the second mailing, all remaining non-respondents were contacted by telephone. Another questionnaire was sent to those that requested one along with a stamped self-addressed envelope. The first mailing resulted in the return of

81 questionnaires (62.3 percent). After the second mailing, a total of 108 questionnaires (83.1 percent) were returned. The follow-up phone call resulted in the return of an additional nine questionnaires being returned for a total of 117 (90.0 percent). One of the respondents had retired since the beginning of the study bringing the total sample to 129, giving a total response rate of 117 out of 129 or 90.7 percent. Three of the respondents returned their questionnaires unanswered. No effort was made to contact nonrespondents beyond the telephone contact.

CHAPTER 4

PRESENTATION AND ANALYSIS OF DATA

The primary purpose of this study was to identify the professional competencies needed by Cooperative Extension agents in Louisiana as perceived by extension agents. Additional purposes of the study were to identify when the respondents believed the identified competencies should be acquired and to describe the responding agents on selected demographic variables.

A review of literature identified 144 competencies that were narrowed down to 141 based on a review by a panel of experts as to the appropriateness of each competency for the Louisiana Cooperative Extension Service. These competencies were then divided into nine categories which were: administration, program planning, program execution, teaching, communication, understanding human behavior, maintaining professionalism, evaluation, and 4-H youth. Respondents utilized a five-point Likert-type scale to identify the importance of the competencies. The numerical values assigned to each point on the scale were as follows: 1 - No importance, 2 - Low importance, 3 - Moderate importance, 4 - High importance, and 5 - Very high importance. Respondents also utilized four categories to identify at what time they believed that the competencies should be acquired. These four categories and their numerical values were as follows: 1 -Before entering the job, 2 - During further formal education, 3 - Cooperative Extension Service (CES) in-service, and 4 - On the job.

Objective One

Objective One was to identify and determine the importance of professional competencies needed by extension agents of the Louisiana Cooperative Extension Service as perceived by currently employed extension agents with a minimum of one year experience. Means and standard deviations pertaining to this objective are displayed by competency category. To facilitate the interpretation of data regarding this objective, an interpretative scale was developed by the researcher. Descriptors and corresponding values on the response scale are presented in Table 2.

Table 2
Scale Utilized to Determine the Importance of Needed Professional Competencies as Perceived by Currently Employed Extension Agents

Importance	Mean
Very High Importance	4.50 - 5.00
High Importance	3.50 - 4.49
Moderate Importance	2.50 - 3.49
Low Importance	1.50 - 2.49
No Importance	1.00 - 1.49

The means and standard deviations for the 26 competencies in the first category, Administration, are found in Table 3. The competency statement "manage time effectively" received the highest mean rating by extension agents with a mean of 4.73. The second highest competency item was "maintain staff morale" with a mean of 4.72. Both of these competency items were categorized as Very High Importance. The competency statement in this category with the lowest mean was "analyze personnel records" with a mean of 3.45. This competency item was the only item listed in the Moderate Importance category. The remaining 23 competency items were classified in the High Importance category.

Of the ten competencies in the category Program Planning, agents rated the competency statement "determine needs of clientele for extension" the highest with a mean of 4.67. Also classified in the Very High Importance category was the competency item "develop a calendar of activities" with a mean of 4.52. The remaining eight competency items were placed in the category High Importance. The lowest rated competency statement for this category was "prepare a long-range program of work" with a mean of 3.75 (see Table 4).

Table 5 consists of the 12 competencies in the category Program Execution. Two of these competency items were classified in the Very High Importance category, nine in the High Importance category and one was classified in the Moderate Importance category. Agents rated the competency statement "develop rapport with clientele" the highest with a mean of 4.79. The second highest

Table 3
Means Obtained from Extension Agents Regarding the Importance of the Professional Competencies Pertaining to Administration

	Competencies	Mean	Std Dev
1.	Manage time effectively	4.73	.44
2.	Maintain staff morale	4.72	.63
3.	Promote inter-office communications	4.48	.72
4.	Orient new staff members	4.48	.72
5.	Provide recognition for staff	4.38	.85
6.	Formulate realistic goals for the extension program	4.30	.63
7.	Develop leadership potential of staff	4.27	.79
8.	Delegate responsibility and authority	4.26	.69
9.	Manage work consistent with resources	4.20	.69
10.	Communicate extension policies and procedures on promotion and salary	4.20	.94
11.	Identify policies specific to your area(s) of responsibility	4.19	.76
12.	Select and supervise personnel	4.13	.86
13.	Identify retirement and insurance policies and procedures	4.01	.98
14.	Explain fringe benefit policy	3.95	.98
15.	Possess knowledge of the history, philosophy, objectives and organization of the extension service	3.94	.81
16.	Conduct staff conferences	3.92	.91
17.	Organize and use staff committees	3.89	.84
18.	Prepare job descriptions	3.87	.94
19.	Coordinate use of equipment, facilities and resources with office staff	3.84	.91
20.	Coordinate work schedules of staff	3.77	.98
21.	Determine interrelationships of staff roles	3.67	.94
22.	Assist in budget preparation	3.63	1.00

(table con'd.)

Table 3 Continued
Means Obtained from Extension Agents Regarding the Importance of the Professional Competencies Pertaining to Administration

	Competencies	Mean	Std Dev
23.	Identify the long-range facility, equipment and supply needs	3.59	.84
24.	Understand how policies are formulated	3.58	.88
25.	Supervise budget expenditures	3.54	1.09
26.	Analyze personnel records	3.45	1.01

Note. The response scale used included the following values: 5 = very high importance; 4 = high importance; 3 = moderate importance; 2 = low importance; and 1 = no importance.

Table 4
Means Obtained from Extension Agents Regarding the Importance of the Professional Competencies Pertaining to Program Planning

	Competencies	Mean	Std Dev
1.	Determine needs of clientele for extension programs	4.67	.68
2.	Develop a calendar of activities	4.52	.68
3.	Establish program priorities	4.45	.59
4.	Determine objectives of extension programs	4.42	.62
5.	Organize and use an advisory committee	4.33	.76
6.	Involve co-workers and community agencies in program planning	4.31	.71
7.	Involve extension support groups and clientele traditionally served in program planning	4.18	.81
8.	Prepare an annual program of work for your area of responsibility	3.97	.93
9.	Involve specialists and other resource people in program planning	3.91	.88
10.	Prepare a long-range program of work	3.75	.92

Note. The response scale used included the following values: 5 = very high importance; 4 = high importance; 3 = moderate importance; 2 = low importance; and 1 = no importance.

competency item was "conduct farm and home visits" with a mean of 4.60. Competency statement "complete LEMIS reports" was the lowest rated competency with a mean of 3.26, which was .67 below the next highest competency item.

For the category Teaching which consisted of 20 items, agents rated "present a concept, principle or skill through the demonstration method" the highest with a mean of 4.48 as can be seen in Table 6. The lowest rated competency statement for this category was "present information with sound motion pictures" with a mean of 3.05. Of the 20 competency items, four were classified as Moderate Importance and the remaining 16 competency items were classified in the High Importance category.

The data collected for the category Communication are displayed in Table 7. Of the 19 items in this category, six were classified in the Very High Importance category. They were: "communicate orally to individuals" (mean = 4.71), "communicate orally to groups" (mean = 4.65), "possess listening skills" (mean = 4.62), "establish rapport with organizations and agencies" (mean = 4.59), "publicize activities through appropriate channels" (mean = 4.56), and "establish communications among members of the extension staff" (mean = 4.53). The remaining 13 items were classified in the High Importance category. The lowest rated item identified by agents was "prepare and present TV programs" with a mean of 3.60. The mean scores for items in the category Understanding Human Behavior appear in Table 8. With a mean of 4.40, agents rated the competency "apply principles of motivation" the highest. Competency item "determine the effect of pressure groups on the thinking process" had the lowest rating with a mean of 3.78. All eleven of the competency items were classified as High Importance, the highest and lowest rated competency items were separated by a difference in mean score of .62.

The category Maintaining Professionalism consisted of 5 items. Of these, the item "maintain professional competency" had the highest mean of 4.65. This was the only competency classified as Very High Importance. The remaining four competencies were classified as High Importance. The lowest rated competency was "participate in professional organizations and activities" with a mean of 4.12 which was only .53 lower than the highest rated mean (see Table 9).

Table 5
Means Obtained from Extension Agents Regarding the Importance of the Professional Competencies Pertaining to Program Execution

	Competencies	Mean	Std Dev
1.	Develop rapport with clientele	4.79	.47
2.	Conduct farm and home visits	4.60	.69
3.	Utilize a calendar of activities	4.46	.73
4.	Use a variety of techniques to influence people to change	4.41	.69
5.	Develop problem solving skills in clientele	4.40	.69
6.	Involve others in executing plans	4.32	.73
7.	Provide leadership for program planning and execution	4.32	.67
8.	Identify and use early adopters or opinion leaders in extension programs	4.28	.74
9.	Conduct result demonstrations	4.17	.89
10.	Select cooperators for trial and result demonstrations	4.12	.91
11.	Follow a written program of work	3.93	.89
12.	Complete LEMIS reports	3.26	1.06

Note. The response scale used included the following values: 5 = very high importance; 4 = high importance; 3 = moderate importance; 2 = low importance; and 1 = no importance.

As reported in Table 10, agents rated the competency "Evaluate your performance as an extension agent" highest for the category Evaluation with a mean of 4.41. Out of the 18 competencies for this category, agents rated the competency item "conduct a literature search utilizing library resources without the aid of a computer" the lowest with a mean of 2.96. None of the competency items were classified in the Very High Importance category. Twelve competency items were classified in the High Importance category, the remaining 6 items were classified in the Moderate Importance category.

Table 11 contains the data for the category 4-H Youth which consisted of 20 competency items. Of these 20 items, agents rated the competency item "obtain parental interest, cooperation and

Table 6
Means Obtained from Extension Agents Regarding the Importance of the Professional Competencies Pertaining to Teaching

	Competencies	Mean	Std Dev
1.	Present a concept, principle or skill through the demonstration method	4.48	.60
2.	Select non-formal teaching methods and techniques for particular students	4.39	.67
3.	Employ principles of learning and teaching	4.35	.70
4.	Develop instructional materials	4.34	.75
5.	Select instructional materials	4.30	.68
6.	Identify and use principles and procedures in teaching adults and youth	4.26	.75
7.	Employ the problem solving approach in teaching	4.24	.79
8.	Plan, organize and conduct tours and field trips	4.20	.78
9.	Conduct group discussions, panel discussions, symposiums and other group dynamics techniques	4.15	.83
10.	Present information with the assistance of resource persons	4.13	.78
11.	Design education exhibits	4.04	.84
12.	Employ reinforcement techniques	4.02	.82
13.	Employ questioning techniques	3.95	.82
14.	Utilize the computer in teaching	3.91	.90
15.	Present information with televised and video-taped materials	3.67	.90
16.	Present information with slides	3.46	1.01
17.	Present information with charts	3.46	1.07
18.	Present information with a lecture	3.37	1.04
19.	Present information with a chalkboard	3.07	1.06
20.	Present information with sound motion pictures	3.05	1.07

Note. The response scale used included the following values: 5 = very high importance; 4 = high importance; 3 = moderate importance; 2 = low importance; and 1 = no importance.

Table 7
Means Obtained from Extension Agents Regarding the Importance of the Professional Competencies Pertaining to Communication

	Competencies	Mean	Std Dev
1.	Communicate orally to individuals	4.71	.46
2.	Communicate orally to groups	4.65	.57
3.	Possess listening skills	4.62	.52
4.	Establish rapport with organizations and agencies	4.59	.51
5.	Publicize activities through appropriate channels	4.56	.55
6.	Establish communications among members of the extension staff	4.53	.64
7.	Conduct telephone conversations	4.49	.66
8.	Provide recognition for accomplishment	4.46	.73
9.	Compose written communication	4.46	.77
10.	Manage correspondence promptly	4.45	.60
11.	Foster supportive relationships with appropriate agencies, organizations and individuals	4.44	.63
12.	Deal with complaints	4.42	.65
13.	Promote effective working relationships with the mass media	4.36	.73
14.	Prepare newspaper and journal articles	4.20	.84
15.	Use non-verbal communications	4.18	.74
16.	Write and/or complete reports	4.16	.89
17.	Use a camera and other photographic equipment	3.87	.83
18.	Prepare and present radio programs	3.68	.96
19.	Prepare and present TV programs	3.60	1.00

Note. The response scale used included the following values: 5 = very high importance; 4 = high importance; 3 = moderate importance; 2 = low importance; and 1 = no importance.

involvement in 4-H activities" the highest with a mean of 4.66. The lowest rated competency by agents for this category was competency item "Organize a parish 4-H foundation committee" with a mean of 3.42 and was the only competency item classified as Moderate Importance. Five competency items, "obtain parental interest, cooperation and involvement in 4-H activities" (mean =

Table 8
Means Obtained from Extension Agents Regarding the Importance of the Professional Competencies Pertaining to Understanding Human Behavior

	Competencies	Mean	Std Dev
1.	Apply principles of motivation	4.40	.69
2.	Identify factors influencing people to become involved	4.34	.71
3.	Ability to influence people to accept change	4.20	.69
4.	Identify functions of agricultural organizations	4.10	.72
5.	Analyze the power structure within the community	4.06	.73
6.	Utilize knowledge of interaction of people in groups	4.06	.75
7.	Apply factors affecting behavior of people	4.05	.82
8.	Recognize factors influencing goal setting	4.05	.79
9.	Identify pressure groups within the community	3.95	.77
10.	Utilize the pattern of interdependence of the various groups in the county to cause change	3.92	.79
11.	Determine the effect of pressure groups on the thinking process	3.78	.82

Note. The response scale used included the following values: 5 = very high importance; 4 = high importance; 3 = moderate importance; 2 = low importance; and 1 = no importance.

Table 9
Means Obtained from Extension Agents Regarding the Importance of the Professional Competencies Pertaining to Maintaining Professionalism

	Competencies	Mean	Std Dev
1.	Maintain professional competency	4.65	.52
2.	Establish and maintain a professional philosophy	4.39	.72
3.	Identify opportunities for professional improvement	4.35	.63
4.	Develop a plan for professional development	4.24	.71
5.	Participate in professional organizations and activities	4.12	.92

Note. The response scale used included the following values: 5 = very high importance; 4 = high importance; 3 = moderate importance; 2 = low importance; and 1 = no importance.

4.66), "maintain a working relationship among volunteer staff" (mean = 4.60), "organize 4-H clubs" (mean = 4.56), "recruit and train volunteer 4-H leaders" (mean = 4.54), and "coordinate 4-H contests and awards programs" (mean = 4.50) were all classified in the Very High Importance category. The remaining 14 competency items were classified in the High Importance category.

Respondents were also asked to indicate any additional competencies they felt would be important for an extension agent to possess that were not included on the survey instrument. These results can be seen in Table 12.

Objective Two

Objective two was to describe extension agents of the Louisiana Cooperative Extension Service with regard to age, highest attained educational level, undergraduate major, number of yearsas a 4-H member, total number of years employed by the Cooperative Extension Service and major area of assigned responsibility.

The age of extension agents in this study ranged from 23 to 63 and is presented in five year groups to facilitate presentation of data (see Table 13). The two age groups with the highest number of respondents were 36 to 40 (26 or 22.8 percent) and 41 to 45 (23 or 20.2 percent), accounting for 43.0 percent of the total. Combined, the categories 35 or less made up 30.7 percent of the total. The three age groups that ranged from 46 to 65 combined to make up 26.3 percent of the total.

The highest educational level attained by the agents in this study can be seen in Table 14. Almost three quarters (71.7 percent) of respondents held Master's degrees.

The data collected for the variable of undergraduate major are represented in Table 15. The most frequently reported undergraduate major was Home Economics, accounting for 38.6 percent of the respondents, followed by Animal Science (20.2 percent) and Agricultural Business (9.6 percent). Vocational Agriculture and Agricultural Education each accounted for 6.1 percent of the agents. Fifteen different undergraduate majors were represented by the remaining 19.4 percent of the respondents.

Table 10
Means Obtained from Extension Agents Regarding the Importance of the Professional Competencies Pertaining to Evaluation

	Competencies	Mean	Std Dev
1.	Evaluate your performance as an extension agent	4.41	.69
2.	Apply research findings when making recommendations to clientele	4.39	.79
3.	Keep current in research findings	4.38	.76
4.	Interpret the impact of change and/or trends upon clientele served	4.27	.60
5.	Cooperate with experiment station and university research facility	4.27	.79
6.	Evaluate results of an extension event or activity	4.23	.70
7.	Evaluate the effectiveness of a parish or multi-parish extension program	4.19	.65
8.	Evaluate the performance of the extension staff	4.17	.73
9.	Identify problems requiring additional research	4.12	.89
10.	Use the experimental approach (research trials or demonstration plots) in extension work	4.05	.91
11.	Interpret research findings	3.91	.86
12.	Analyze reports	3.60	.92
13.	Interpret results of survey	3.46	.95
14.	Develop survey instruments	3.45	.87
15.	Conduct surveys	3.38	.95
16.	Conduct a literature search utilizing computer services	3.37	1.11
17.	Analyze data using mini-computers	3.37	.99
18.	Conduct a literature search utilizing library resources without the aid of a computer	2.96	1.11

Note. The response scale used included the following values: 5 = very high importance; 4 = high importance; 3 = moderate importance; 2 = low importance; and 1 = no importance.

Respondents were asked to indicate if they had been in 4-H as a youth. Of the 71.9 percent of respondents that had been in 4-H at least one year, over half (52.4 percent) had been 4-H members for either eight or nine years as can be seen in Table 16. The average number of years of 4-H experience for those having been in 4-H was 6.87 years.

Table 11
Means Obtained from Extension Agents Regarding the Importance of the Professional Competencies Pertaining to 4-H Youth

	Competencies	Mean	Std Dev
1.	Obtain parental interest, cooperation and involvement in 4-H activities	4.66	.68
2.	Maintain a working relationship among volunteer 4-H staff	4.60	.69
3.	Organize 4-H clubs	4.56	.73
4.	Recruit and train volunteer 4-H leaders	4.54	.72
5.	Coordinate 4-H contests and awards programs	4.50	.70
6.	Provide officer training for 4-H officers	4.49	.73
7.	Assist volunteer leaders in organizing 4-H clubs	4.35	.88
8.	Coordinate 4-H programs with other extension programs	4.21	.87
9.	Establish criteria for selecting adult and teen 4-H volunteer leaders	4.18	.75
10.	Identify the importance and uses of youth camps and the 4-H program	4.15	.84
11.	Evaluate progress and development of 4-H members	4.13	.81
12.	Coordinate activities of other parish professional personnel with 4-H responsibilities	4.13	.88
13.	Guide work of all volunteer 4-H leaders	4.04	.84
14.	Coordinate activities of all volunteer 4-H leaders	3.99	1.01
15.	Develop 4-H annual plans of work	3.96	.98
16.	Identify and develop an affirmative action plan dealing with 4-H	3.71	1.07
17.	Solicit contributions for parish 4-H programs	3.70	1.05
18.	Coordinate activities of other youth related organizations	3.55	1.15
19.	Develop a constitution and by-laws for county 4-H program	3.53	1.14
20.	Organize a parish 4-H foundation committee	3.42	1.03

Note. The response scale used included the following values: 5 = very high importance 4 = high importance; 3 = moderate importance; 2 = low importance; and 1 = no importance.

Table 12
Responses Obtained from Extension Agents Regarding Professional Competencies not Included on the Survey Instrument

	Competencies
1.	Crisis Management
2.	Raising self esteem of 4-H members and leaders
3.	Handling discipline of 4-H members
4.	Being able to listen to people
5.	To be able to identify problem causes rather than symptoms
6.	Ability to communicate with elected officials
7.	The meaning of true teamwork
8.	Supervision techniques
9.	Competence in meaning of true equal
10.	Working knowledge of terms: harassment; sexism; "meism"; etc.
11.	SCIF motivation
12.	Leadership skills
13.	Working with culturally diversified audiences
14.	Understand the value of a data management system for 4-H enrollment
15.	Basic computer skills
16.	Work with police force
17.	Meet with school board
18.	Identify issues in communities
19.	Work with task force concept
20.	Adolescent psychology to solve teen problems
21.	Improving value system of some teens
22.	Train agents in making farm visits
23.	Agents should be proficient in commodities being produced in their parish (cotton, cattle, garden, 4-H, etc.)

Table 13
Number and Percent of Extension Agents by Age

Years of Age	Number	Percent
25 or less	5	4.4
26-30	13	11.4
31-35	17	14.9
36-40	26	22.8
41-45	23	20.2
46-50	9	7.9
51-55	9	7.9
56-60	9	7.9
61 or more	3	2.6
Total	114	100.0

Note. Mean age of respondents was 40.88 years

Table 14
Number and Percent of Responses Relative to Highest Attained Educational Level

Highest Degree Held	Number	Percent
Bachelor's Degree	25	22.1
Master's Degree	81	71.7
Master's Plus 30	1	0.9
Doctoral Degree	6	5.3
Total	113	100.0

For this variable, respondents were asked to indicate years of employment by the Extension Service by choosing one of two categories, those with one to five years experience and those with more than five years experience. Roughly three quarters of the agents reported more than five years experience (75.4 percent) while one quarter reported one to five years experience (24.6 percent).

Table 15
Frequency and Percent Relative to Respondents' Undergraduate Major

Undergraduate Major	Number	Percent
Home Economics	44	38.5
Animal Science	23	20.1
Agricultural Business	11	9.6
Vocational Agriculture	7	6.1
Agricultural Education	7	6.1
Agronomy	3	2.6
Plant and Soil Science	3	2.6
Dairy Science	2	1.8
Biology	2	1.8
Forestry and Wildlife	2	1.8
Wildlife and Fisheries	1	0.1
Agricultural Economics	1	0.1
Food Service Management	1	0.1
Nutrition	1	0.1
Dietetics	1	0.1
Wildlife Management	1	0.1
Vocational Education	1	0.1
Zoology	1	0.1
General Agriculture	1	0.1
Horticulture	1	0.1
Total	114	100.0

Respondents were also asked to identify their major area of responsibility. The highest percentage of respondents identified 4-H as their major area of responsibility (48.2 percent). Three agents identified dual areas of responsibility as can be seen in Table 17.

Table 16
Frequency and Percent of Responses Relative to the Extension Agents' Number of Years of 4-H Membership

Years of 4-H Membership	Number	Percent
1	1	1.2
2	6	7.3
3	5	6.1
4	7	8.6
5	6	7.3
6	7	8.6
7	5	6.1
8	23	28.0
9	20	24.4
10	1	1.2
11	1	1.2
Total	82	100.00

Note. Mean years of 4-H experience was 6.87 years

Objective Three

Objective three sought to identify at what time (i.e., before entering the job, during further formal education, Cooperative Extension Service in-service or on the job) these professional competencies should be acquired as perceived by the agents of the Louisiana Cooperative Extension Service who had been employed for more than one year. For discussion in this objective, time of competency acquisition with the most responses will be identified as the primary choice. If any other time of acquisition received more than 28 responses (roughly one quarter of the responses) it was listed as a secondary choice.

For the competency category Administration, six competency items, "possess knowledge of the history, philosophy, objectives and organization of the Extension Service", "understand howpolicies are

Table 17
Frequency and Percent of Extension Agents' Responses Relative to Major Area of Responsibility

Major Area	Number	Percent
4-H	55	48.2
Agriculture and Natural Resources	40	35.1
Home Economics	16	14.0
Home Economics and 4-H	2	1.8
Agriculture and Natural Resources and 4-H	1	.9
Total	114	100.00

formulated", "identify policies specific to your area(s) of responsibility", "identify retirement and insurance policies and procedures", "explain fringe benefit policy and prepare job descriptions", were selected as the primary choice to be acquired during CES in-service (Table 18). The remaining 20 competency items were selected to be acquired on the job. Before entering the job was the secondary choice for three competencies, CES in-service the secondary choice for 14 competencies, and on the job the secondary choice for five competencies.

One competency item observed in Table 19, "determine objectives of extension programs", was identified as the respondents' primary choice to be acquired during CES in-service for the competency category Program Planning. The remaining nine competencies were to be acquired on the job. CES in-service was the secondary choice for seven of the ten competency items and on the job the secondary choice for one competency item.

Agent responses to the time of acquisition for the competency category Program Execution can be viewed in Table 20. All of these competencies in this category were identified as to be acquired on the job. CES in-service was the secondary choice for three competency items.

Twenty competency items make up the competency category Teaching. Of these twenty competency items, agents responded that five, "identify and use principles and

Table 18
Distribution of Respondents' Choice of Times for Acquiring Competencies Related to Administration

		Time of Acquisition			
		1	2	3	4
	Competencies	N/P	N/P	N/P	N/P
1.	Possess knowledge of the history, philosophy, objectives and organization of the extension service	28/24.6[b]	11/ 9.6	69/60.5[a]	6/ 5.3
2.	Formulate realistic goals for the extension program	2/ 1.8	10/ 8.8	42/37.2[b]	59/52.2[a]
3.	Manage work consistent with resources	8/ 7.0	2/ 1.8	28/24.6[b]	76/66.7[a]
4.	Identify the long-range facility, equipment and supply needs	4/ 3.6	2/ 1.8	17/15.2	89/79.4[a]
5.	Coordinate use of equipment, facilities and resources with office staff	6/ 5.2	1/ 0.9	8/ 7.0	99/86.9[a]
6.	Assist in budget preparation	5/ 4.5	7/ 6.3	28/25.2[b]	71/64.0[a]
7.	Supervise budget expenditures	1/ 0.9	10/ 9.2	24/22.0	74/67.9[a]
8.	Manage time effectively	33/29.5[b]	5/ 4.5	28/25.0[b]	46/41.0[a]
9.	Coordinate work schedules of staff	9/ 7.9	3/ 2.6	18/15.8	84/73.7[a]
10.	Select and supervise personnel	9/ 8.0	15/13.3	30/26.5[b]	59/52.2[a]
11.	Understand how policies are formulated	12/10.5	12/10.5	57/50.0[a]	33/29.0[b]
12.	Identify policies specific to your area(s) of responsibility	13/11.5	4/ 3.5	53/46.9[a]	43/38.1[b]
13.	Organize and use staff committees	5/ 4.4	6/ 5.3	40/35.4[b]	62/54.9[a]
14.	Conduct staff conferences	5/ 4.5	2/ 1.8	36/32.1[b]	69/61.6[a]
15.	Promote inter-office communications	9/ 8.0	5/ 4.5	27/24.1	71/63.4[a]
16.	Delegate responsibility and authority	18/15.9	6/ 5.3	28/24.8[b]	61/54.0[a]

(table con'd.)

Table 18 Continued
Distribution of Respondents' Choice of Times for Acquiring Competencies Related to Administration

		Time of Acquisition			
		1	2	3	4
	Competencies	N/P	N/P	N/P	N/P
17.	Orient new staff members	10/ 9.0	2/ 1.8	46/41.4[b]	53/47.8[a]
18.	Communicate extension policies and procedures on promotion and salary	18/15.9	4/ 3.5	38/33.7[b]	53/46.9[a]
19.	Identify retirement and insurance policies and procedures	21/18.6	4/ 3.5	57/50.5[a]	31/27.4[b]
20.	Explain fringe benefit policy	25/22.1	3/ 2.7	56/49.6[a]	29/25.7[b]
21.	Provide recognition for staff	6/ 5.3	2/ 1.8	28/24.8[b]	77/68.1[a]
22.	Maintain staff morale	8/ 7.3	4/ 3.6	24/21.8	74/67.3[a]
23.	Prepare job descriptions	28/25.0[b]	14/12.5	41/36.6[a]	29/25.9[b]
24.	Develop leadership potential of staff	7/ 6.3	13/11.7	38/34.2[b]	53/47.8[a]
25.	Analyze personnel records	9/ 8.1	13/11.7	33/29.7[b]	56/50.5[a]
26.	Determine interrelationships of staff roles	8/ 7.3	11/10.1	32/29.4[b]	58/53.2[a]

Note. The time of acquisition includes the following category values: 1 = Before entering job; 2 = Further formal education; 3 = CES in-service; and 4 = On the job. N/P = Number/Percent. [a]Primary choice. [b]Secondary choice.

procedures in teaching adults and youth", "employ principles of learning and teaching", "develop instructional materials", "design educational exhibits" and "utilize the computer in teaching", should be acquired during CES in-service. Respondents indicated that the remaining 15 competency items should be acquired on the job as can be seen in Table 21. Before entering the job and further formal education were the secondary choices for one competency item each. CES in-service was the secondary choice for nine competency items and on the job was the secondary choice for four competency items.

Table 19
Distribution of Respondents' Choice of Times for Acquiring Competencies Related to Program Planning

		Time of Acquisition			
		1	2	3	4
	Competencies	N/P	N/P	N/P	N/P
1.	Develop a calendar of activities	10/ 9.0	3/ 2.7	25/22.5	73/65.8[a]
2.	Determine needs of clientele for extension programs	3/ 2.7	5/ 4.5	34/30.6[b]	69/62.2[a]
3.	Determine objectives of extension programs	5/ 4.5	8/ 7.3	54/49.1[a]	43/39.1[b]
4.	Establish program priorities	3/ 2.7	3/ 2.7	42/38.2[b]	62/56.4[a]
5.	Prepare an annual program of work for your area of responsibility	5/ 4.5	8/ 7.2	47/42.4[b]	51/45.9[a]
6.	Prepare a long-range program of work	3/ 2.7	7/ 6.4	49/44.5[b]	51/46.4[a]
7.	Organize and use an advisory committee	3/ 2.7	6/ 5.5	40/36.4[b]	61/55.4[a]
8.	Involve co-workers and community agencies in program planning	3/ 2.7	2/ 1.8	27/24.1	80/71.4[a]
9.	Involve specialists and other resource people in program planning	0/ 0.0	2/ 1.8	30/27.0[b]	79/71.2[a]
10.	Involve extension support groups and clientele traditionally served in program planning	1/ 0.9	1/ 0.9	30/27.0[b]	79/71.2[a]

Note. The time of acquisition includes the following category values: 1 = Before entering the job; 2 = Further formal education; 3 = CES in-service; and 4 = On the job. N/P = Number/Percent. [a]Primary choice. [b]Secondary choice.

The agents' responses, displayed in Table 22, indicate when the competency items in the category Communication should be acquired. In this category agents indicated that five competency items, "compose written communication", "communicate orally to groups", "communicate orally to individuals", "use non-verbal communications" and "possess listening skills", should be acquired before entering the job. Five items, "write and/or complete reports", "prepare and present radio programs", "prepare and present TV programs", "prepare newspaper and journal articles" and "use a

Table 20
Distribution of Respondents' Choice of Times for Acquiring Competencies Related to Program Execution

		Time of Acquisition			
		1	2	3	4
	Competencies	N/P	N/P	N/P	N/P
1.	Utilize a calendar of activities	10/ 9.0	3/ 2.7	17/15.3	81/73.0[a]
2.	Follow a written program of work	6/ 5.4	3/ 2.7	25/22.5	77/69.4[a]
3.	Provide leadership for program planning and execution	6/ 5.4	5/ 4.5	34/30.3[b]	67/59.8[a]
4.	Develop rapport with clientele	12/10.8	1/ 0.9	7/ 6.3	91/82.0[a]
5.	Complete LEMIS reports	1/ 0.9	1/ 0.9	31/27.9[b]	78/70.3[a]
6.	Use a variety of techniques to influence people to change	9/ 8.1	17/15.3	27/24.3	58/52.3[a]
7.	Involve others in executing plans	6/ 5.4	6/ 5.4	27/24.3	72/64.9[a]
8.	Identify and use early adopters or opinion leaders in extension programs	3/ 2.7	10/ 9.0	25/22.5	73/65.8[a]
9.	Conduct farm and home visits	7/6.3	2/ 1.8	8/ 7.2	94/84.7[a]
10.	Select cooperators for trial and result demonstrations	2/ 1.8	3/ 2.7	25/22.7	80/72.8[a]
11.	Develop problem solving skills in clientele	11/10.1	12/11.0	29/26.6[b]	57/52.3[a]
12.	Conduct result demonstrations	6/ 5.5	8/7.3	25/22.7	71/64.5[a]

Note. The time of acquisition includes the following category values: 1 = Before entering the job; 2 = Further formal education; 3 = CES in-service; and 4 = On the job. N/P = Number/Percent. [a]Primary choice. [b]Secondary choice.

camera and other photographic equipment" were selected to be acquired during CES in-service. Agents chose the remaining nine competency items out of 19 to be acquired on the job. Before entering the job and further formal education were both chosen as secondary times of acquisition for one competency item each. CES in-service was the secondary choice for time of

Table 21
Distribution of Respondents' Choice of Times for Acquiring Competencies Related to Teaching

		Time of Acquisition			
		1	2	3	4
	Competencies	N/P	N/P	N/P	N/P
1.	Identify and use principles and procedures in teaching adults and youth	23/20.9	26/23.6	34/30.9[a]	27/24.6
2.	Employ principles of learning and teaching	23/20.9	2825.5[b]	31/28.1[a]	28/25.5[b]
3.	Develop instructional materials	17/15.5	18/16.4	44/40.0[a]	31/28.1[b]
4.	Select instructional materials	16/14.5	15/13.6	28/25.5[b]	51/46.4[a]
5.	Select non-formal teaching methods and techniques for particular situations	10/ 9.3	7/ 6.5	32/29.6[b]	59/54.6[a]
6.	Present information with a lecture	30/27.8[b]	14/13.0	24/22.2	40/37.0[a]
7.	Present a concept, principle or skill through the demonstration method	20/18.9	9/ 8.5	32/30.2[b]	45/42.4[a]
8.	Present information with the assistance of resource persons	7/ 6.5	6/ 6.5	37/34.3[b]	58/53.7[a]
9.	Present information with slides	23/20.9	9/ 8.2	22/20.0	56/50.9[a]
10.	Present information with sound motion pictures	21/19.1	11/10.0	23/20.9	55/50.0[a]
11.	Present information with televised and video-taped materials	21/18.9	7/ 6.3	26/23.4	57/51.4[a]
12.	Present information with charts	25/22.7	7/ 6.4	25/22.7	53/48.2[a]
13.	Present information with a chalkboard	27/24.5	6/ 5.5	24/21.8	53/48.2[a]
14.	Conduct group discussions, panel discussions, symposiums, and other group dynamics techniques	15/13.7	14/12.7	37/33.6[b]	44/40.0[a]
15.	Design educational exhibits	13/11.7	11/ 9.9	46/41.4[a]	41/37.0[b]
16.	Employ reinforcement techniques	13/11.9	19/17.4	30/27.5[b]	47/43.2[a]
17.	Employ the problem solving approach in teaching	14/12.8	22/20.2	30/27.5[b]	43/39.5[a]

(table con'd.)

Table 21 Continued
Distribution of Respondents' Choice for Acquiring Competencies Related to Teaching

		Time of Acquisition			
		1	2	3	4
	Competencies	N/P	N/P	N/P	N/P
18.	Employ questioning techniques	12/11.0	18/16.5	34/31.2[b]	45/41.3[a]
19.	Plan, organize and conduct tours and field trips	6/ 5.4	2/ 1.8	30/27.0[b]	73/65.8[a]
20.	Utilize the computer in teaching	12/10.9	22/20.0	47/42.7[a]	29/26.4[b]

Note. The time of acquisition includes the following category values: 1 = Before entering the job; 2 = Further formal education; 3 = CES in-service; and 4 = On the job. N/P = Number/Percent. [a]Primary choice. [b]Secondary choice.

acquisition for nine competency items and on the job was the secondary choice for competency acquisition for four competency items.

Understanding Human Behavior is the next competency category agents were asked to respond to regarding when the professional competencies should be acquired. Table 23 contains the responses for this category. Six competency items "apply principles of motivation", "identify factors influencing people to become involved", "identify functions of agricultural organizations", "recognize factors influencing goal setting", "apply factors affecting behavior of people" and "ability to influence people to accept change", were selected by agents to be acquired during CES in-service. The remaining five competency items were selected to be acquired on the job. On the job was also selected as a secondary choice for time of acquisition for six competency items, CES in-service was a secondary choice for two competency items.

Table 24 contains the data regarding the competency category Maintaining Professionalism. In this competency category respondents selected all five competency items to be acquired on the job. CES in-service was chosen as a secondary time of acquiring the competencies for three competency items.

Table 22
Distribution of Respondents' Choice of Times for Acquiring Competencies Related to Communication

		Time of Acquisition			
		1	2	3	4
	Competencies	N/P	N/P	N/P	N/P
1.	Conduct telephone conversations	37/33.3[b]	2/ 1.8	17/15.3	55/49.6[a]
2.	Establish communications among members of the extension staff	15/13.5	3/ 2.7	25/22.5	68/61.3[a]
3.	Compose written communication	45/41.3[a]	6/ 5.5	25/22.9	33/30.3[b]
4.	Write and/or complete reports	27/24.5	2/ 1.8	46/41.9[a]	35/31.8[b]
5.	Communicate orally to groups	50/45.5[a]	7/ 6.4	16/14.5	37/33.6[b]
6.	Communicate orally to individuals	57/51.8[a]	4/ 3.6	13/11.8	36/32.8[b]
7.	Use non-verbal communications	44/40.0[a]	8/ 7.3	26/23.6	32/28.1[b]
8.	Possess listening skills	62/56.4[a]	3/ 2.7	12/10.9	33/30.0[b]
9.	Prepare and present radio programs	7/ 6.4	10/ 9.2	51/46.8[a]	41/37.6[b]
10.	Prepare and present TV programs	6/ 5.5	12/10.9	60/54.5[a]	32/29.1[b]
11.	Prepare newspaper and journal articles	12/11.0	9/ 8.3	56/51.4[a]	32/29.3[b]
12.	Manage correspondence promptly	38/34.2[b]	3/ 2.7	24/21.6	46/41.5[a]
13.	Provide recognition for accomplishment	15/13.5	2/ 1.8	26/23.4	68/61.3[a]
14.	Deal with complaints	18/16.2	3/ 2.7	29/26.1[b]	61/55.0[a]
15.	Promote effective working relationships with the mass media	9/ 8.2	2/ 1.8	45/40.9[b]	54/49.1[a]
16.	Establish rapport with organizations and agencies	7/ 6.3	2/ 1.8	28/25.2[b]	74/66.7[a]
17.	Publicize activities through appropriate channels	6/ 5.6	4/ 3.7	37/34.3[b]	61/56.4[a]
18.	Use a camera and other photographic equipment	15/13.8	2/ 1.8	51/46.8[a]	41/37.6[b]
19.	Foster supportive relationships with appropriate agencies, organizations and individuals	6/ 5.4	1/ 0.9	32/28.8[b]	72/64.9[a]

Note. The time of acquisition includes the following category values: 1 = Before entering the job; 2 = Further formal education; 3 = CES in-service; and 4 = On the job. N/P = Number/Percent. [a]Primary choice. [b]Secondary choice.

Table 23
Distribution of Respondents' Choice of Times for Acquiring Competencies Related to Understanding Human Behavior

		Time of Acquisition			
		1	2	3	4
	Competencies	N/P	N/P	N/P	N/P
1.	Apply principles of motivation	24/21.8	21/19.1	36/32.7[a]	29/26.4[b]
2.	Identify factors influencing people to become involved	15/13.5	23/20.7	39/35.1[a]	34/30.7[b]
3.	Identify functions of agricultural organizations	5/ 4.5	13/11.7	47/42.3[a]	46/41.5[b]
4.	Determine the effect of pressure groups on the thinking process	8/ 7.2	25/22.5	37/33.3[b]	41/37.0[a]
5.	Recognize factors influencing goal setting	11/ 9.9	27/24.3	43/38.7[a]	30/27.1[b]
6.	Apply factors affecting behavior of people	17/15.5	22/20.0	39/35.5[a]	32/29.0[b]
7.	Ability to influence people to accept change	11/10.1	22/20.2	43/39.4[a]	33/30.3[b]
8.	Analyze the power structure within the community	6/ 5.5	10/ 9.2	22/20.2	71/65.1[a]
9.	Identify pressure groups within the community	3/ 2.7	9/ 8.2	27/24.5	71/64.6[a]
10.	Utilize knowledge of interaction of people in groups	8/ 7.3	19/17.3	32/29.1[b]	51/46.3[a]
11.	Utilize the pattern of interdependence of the various groups in the county to cause change	2/ 1.8	18/16.4	25/22.7	65/59.1[a]

Note. The time of acquisition includes the following category values: 1 = Before entering job; 2 = Further formal education; 3 = CES in-service; and 4 = On the job. N/P = Number/Percent. [a]Primary choice. [b]Secondary choice.

The competency category Evaluation contained 18 competency items. Of these 18 competency items, three competency items, "develop survey instruments", "conduct a literature search utilizing computer services" and "analyze data using mini-computers" agents believed should be acquired during CES in-service. The remaining 15 competency items should be acquired on the

Table 24
Distribution of Respondents' Choice of Times for Acquiring Competencies Related to Maintaining Professionalism

		Time of Acquisition			
		1	2	3	4
	Competencies	N/P	N/P	N/P	N/P
1.	Identify opportunities for professional improvement	8/ 7.3	16/14.7	36/33.0[b]	49/45.0[a]
2.	Develop a plan for professional development	7/ 6.4	14/12.8	39/35.8[b]	49/45.0[a]
3.	Maintain professional competency	7/ 6.4	18/16.5	30/27.5[b]	54/49.6[a]
4.	Establish and maintain a professional philosophy	13/11.9	10/ 9.2	27/24.8	59/54.1[a]
5.	Participate in professional organizations and activities	7/ 6.3	3/ 2.7	16/14.4	85/76.6[a]

Note. The time of acquisition includes the following category values: 1 = Before entering the job; 2 = Further formal education; 3 = CES in-service; and 4 = On the job. N/P = Number/Percent. [a]Primary choice. [b]Secondary choice.

job according to respondents. Before entering the job was the secondary choice of time for acquiring the competency for one competency item. Further formal education was chosen as a secondary choice of time for two competencies. Thirteen competency items were selected as secondary choices for CES in-service and on the job was chosen as a secondary time for acquiring the competency for three competency items. The data for this competency category can be seen in Table 25.

Table 26 contains the data for competency category 4-H Youth. In this category, all of the competency items except one "identify and develop an affirmative action plan dealing with 4-H" were chosen to be acquired on the job. Agents believed that this competency should be acquired during CES in-service. CES in-service was chosen as the secondary choice as to when the competency should be acquired for seven competency items. On the job was the secondary choice for one competency item.

Table 25
Distribution of Respondents' Choice of Times for Acquiring Competencies Related to Evaluation

		Time of Acquisition			
		1	2	3	4
	Competencies	N/P	N/P	N/P	N/P
1.	Evaluate the effectiveness of a parish or multi-parish extension program	1/ 0.9	7/ 6.4	41/37.6[b]	60/55.1[a]
2.	Evaluate your performance as an extension agent	2/ 1.8	3/ 2.7	25/22.7	80/72.8[a]
3.	Evaluate the performance of the extension staff	1/ 0.9	5/ 4.6	32/29.6[b]	70/64.8[a]
4.	Interpret the impact of change and/or trends upon clientele served	3/ 2.8	8/ 7.3	37/33.9[b]	61/56.0[a]
5.	Develop survey instruments	3/ 2.8	29/26.6[b]	41/37.6[a]	36/33.0[b]
6.	Conduct surveys	5/ 4.6	26/23.9	32/29.4[b]	46/42.1[a]
7.	Interpret results of survey	5/ 4.6	31/28.7[b]	33/30.6[b]	39/36.1[a]
8.	Analyze reports	5/ 4.7	24/22.4	33/30.8[b]	45/42.1[a]
9.	Evaluate results of an extension event or activity	2/ 1.8	4/ 3.7	29/26.6[b]	74/67.9[a]
10.	Interpret research findings	14/13.2	27/25.5	32/30.2[b]	33/31.1[a]
11.	Apply research findings when making recommendations to clientele	8/ 7.3	14/12.7	38/34.5[b]	50/45.5[a]
12.	Use the experimental approach (research trials or demonstration plots) in extension work	7/ 6.5	13/12.0	35/32.4[b]	53/49.1[a]
13.	Cooperate with experiment station and university research facility	3/ 2.7	2/ 1.8	32/28.6[b]	75/66.9[a]
14.	Identify problems requiring additional research	3/ 2.7	12/10.8	28/25.2[b]	68/61.3[a]
15.	Keep current in research findings	5/ 4.6	7/ 6.5	36/33.3[b]	60/55.6[a]
16.	Conduct a literature search utilizing library resources without the aid of a computer	35/31.3[b]	19/17.0	22/19.6	36/32.1[a]

(table con'd.)

Table 25 Continued
Distribution of Respondents' Choice of Times for Acquiring Competencies Related to Evaluation

		Time of Acquisition			
		1	2	3	4
	Competencies	N/P	N/P	N/P	N/P
17.	Conduct a literature search utilizing computer services	21/18.6	19/16.8	37/32.7[a]	36/31.9[b]
18.	Analyze data using mini-computers	13/11.7	18/16.2	50/45.0[a]	30/27.1[b]

Note. The time of acquisiton includes the following category values: 1 = Before entering job; 2 = Further formal education; 3 = CES in-service; and 4 = On the job. N/P = Number/Percent.
[a]Primary choice. [b]Secondary choice.

The final competency category was the one dealing with additional competencies not included on the questionnaire. The data for this competency category are displayed in Table 28. This category differs from previous categories in that none of the competency items received more than one response. Differences also existed in that on the job received the least amount of respondents, "train agents in making farm visits" and "agents should be proficient in commodities being produced in their parish i.e. cotton, cattle, garden, 4-H etc.". During formal further education was selected by agents for the four competency items "being able to listen to people", "working knowledge of terms: harassment; sexism; meism; etc.", "adolescent psychology to solve teen problems", and "improving value system of some teens". Six agents selected before entering the job as the time to acquire their competencies. These competencies were "ability to communicate with elected officials", "meaning of true team work", "supervision techniques", "competence in meaning of true equal", "SCIF motivation", and "leadership skills". The remaining 11 competency items were chosen to be acquired during CES in-service.

The majority of competency items (77.3 percent) were as categorized as High Importance. The remaining competency items were somewhat evenly distributed between Moderate Importance (9.9 percent) and Very High Importance (12.8 percent) as is shown in Table 29. None of the

Table 26
Distribution of Respondents' Choice of Times for Acquiring Competencies Related to 4-H Youth

		Time of Acquisition			
		1	2	3	4
	Competencies	N/P	N/P	N/P	N/P
1.	Organize a parish 4-H foundation committee	1/ 0.9	3/ 2.7	41/36.6[b]	67/59.8[a]
2.	Establish criteria for selecting adult and teen 4-H volunteer leaders	4/ 3.6	2/ 1.8	47/42.3[b]	58/52.3[a]
3.	Recruit and train volunteer 4-H leaders	2/ 1.8	1/ 0.9	52/46.8[b]	56/50.5[a]
4.	Develop a constitution and by-laws for county 4-H program	1/ 0.9	5/ 4.5	36/32.1[b]	70/62.5[a]
5.	Identify and develop an affirmative action plan dealing with 4-H	1/ 0.9	5/ 4.5	53/47.7[a]	52/46.9[b]
6.	Coordinate 4-H programs with other extension programs	1/ 0.9	3/ 2.7	21/18.9	86/77.5[a]
7.	Develop 4-H annual plans of work	2/ 1.8	3/ 2.7	39/35.1[b]	67/60.4[a]
8.	Assist volunteer leaders in organizing 4-H clubs	1/ 0.9	1/ 0.9	25/22.3	85/75.9[a]
9.	Obtain parental interest, cooperation and involvement in 4-H activities	2/ 1.8	2/ 1.8	17/15.0	92/81.4[a]
10.	Coordinate 4-H contests and awards programs	1/ 0.9	1/ 0.9	22/19.4	89/78.8[a]
11.	Provide officer training for 4-H officers	1/ 0.9	1/ 0.9	33/29.2[b]	78/69.0[a]
12.	Organize 4-H clubs	4/ 3.6	0/ 0.0	22/19.6	86/76.8[a]
13.	Coordinate activities of other youth-related organizations	1/ 0.9	2/ 1.8	18/16.2	90/81.1[a]
14.	Coordinate activities of other parish professional personnel with 4-H responsibilities	0/ 0.0	3/ 2.7	15/13.5	93/83.8[a]
15.	Coordinate activities of all volunteer 4-H leaders	0/ 0.0	2/ 1.8	19/17.1	90/81.1[a]
16.	Guide work of all volunteer 4-H leaders	1/ 0.9	2/ 1.8	23/20.5	86/76.8[a]

(table con'd.)

Table 26 Continued
Distribution of Respondents' Choice of Times for Acquiring Competencies Related to 4-H Youth

		Time of Acquisition			
		1	2	3	4
	Competencies	N/P	N/P	N/P	N/P
17.	Evaluate progress and development of 4-H members	3/ 2.7	4/ 3.6	23/20.7	81/73.0[a]
18.	Identify the importance and uses of youth camps and the 4-H program	2/ 1.8	1/ 0.9	35/31.5[b]	73/65.8[a]
19.	Maintain a working relationship among volunteer 4-H staff	1/ 0.9	2/ 1.8	15/13.5	93/83.8[a]
20.	Solicit contributions for parish 4-H programs	3/ 2.7	1/ 0.9	25/22.5	82/73.9[a]

Note. The time of acquisition includes the following category values: 1 = Before entering job; 2 = Further formal education; 3 = CES in-service; and 4 = On the job. N/P = Number/Percent. [a]Primary choice. [b]Secondary choice.

competency items were categorized as either No Importance or Low Importance.

Objective Four

Objective four was to determine the importance of professional competency factors (categories) based on the interpretative scale utilized in Objective One, as determined by extension agents of the Louisiana Cooperative Extension Service. All of the competency categories received an importance rating of at least Moderate Importance. Mean scores ranged from 3.88 for the Evaluation category to 4.35 for the category Maintaining Professionalism as can be seen in Table 28.

Objective Five

Objective Five was to develop an educational content outline for each of the following levels of competency acquisition: before entering the job; during further formal education; Cooperative Extension Service (CES) in-service; and on the job. For this objective, the choice of time of competency acquisition with the most responses will be the respondents' primary choice. If any time

Table 27
Respondents' Choice as to Degree of Importance of Professional Competencies

Competency Category	Number of Competencies by Degree of Importance				
	No	Low	Moderate	High	Very High
A. Administration	0	0	1	23	2
B. Program Planning	0	0	0	8	2
C. Program Execution	0	0	1	9	2
D. Teaching	0	0	5	15	0
E. Communication	0	0	0	13	6
F. Understanding Human Behavior	0	0	0	11	0
G. Maintaining Professionalism	0	0	0	4	1
H. Evaluation	0	0	6	12	0
I. 4-H Youth	0	0	1	14	5
Total	0	0	14	109	18
Percent	0.0	0.0	9.9	77.3	12.8

of acquisition for the competency item, other than the primary choice received 28 or more responses (roughly 25 percent), it was termed a secondary choice.

The level of acquisition "before entering the job" received as primary choices, five competency items, all of which were from the competency category Communication. Five competency items were also chosen as secondary choices for this time of acquisition, two from the competency category Communication, one from Teaching, and two from Administration. Table 30 shows the primary choices and Table 31 the secondary choices for competency items and categories related to this level of acquisition.

No competency items were selected as primary choices to be acquired during "further formal education". Three competency items were secondary choices for this category and can be seen in Table 32. One was from the competency category Teaching, the other two from Evaluation.

Table 28
Distribution of Respondents' Choice of Times for Acquiring Competencies Not Listed on Survey Instrument

	Competencies	1	2	3	4
1.	Crisis Management	0	0	1	0
2.	Raising self esteem of 4-H members and leaders	0	0	1	0
3.	Handling discipline of 4-H members	0	0	1	0
4.	Being able to listen to people	0	1	0	0
5.	To be able to identify problem causes rather than symptoms	0	0	1	0
6.	Ability to communicate with elected officials	1	0	0	0
7.	The meaning of true teamwork	1	0	0	0
8.	Supervision techniques	1	0	0	0
9.	Competence in meaning of true equal	1	0	0	0
10.	Working knowledge of terms: harassment; sexism; "meism"; etc.	0	1	0	0
11.	SCIF motivation	1	0	0	0
12.	Leadership skills	1	0	0	0
13.	Working with culturally diversified audiences	0	0	1	0
14.	Understand the value of a data management system for 4-H enrollment	0	0	1	0
15.	Basic computer skills	0	0	1	0
16.	Work with police force	0	0	1	0
17.	Meet with school board	0	0	1	0
18.	Identify issues in communities	0	0	1	0
19.	Work with task force concept	0	0	1	0
20.	Adolescent psychology to solve teen problems	0	1	0	0
21.	Improving value system of some teens	0	1	0	0
22.	Train agents in making farm visits	0	0	0	1
23.	Agents should be proficient in commodities being produced in their parish (cotton, cattle, garden, 4-H, etc.)	0	0	0	1

Note. The time of acquisition includes the following values: 1 = Before entering job; 2 = Further formal education; 3 = CES in-service; and 4 = On the job.

Table 29
Means Obtained from Extension Agents Regarding the Importance of Professional Competency Factors (Categories)

	Competency Category	Mean	Std Dev
1.	Maintaining Professionalism	4.35	.53
2.	Communication	4.34	.44
3.	Program Planning	4.25	.50
4.	Program Execution	4.25	.42
5.	4-H Youth	4.12	.60
6.	Understanding Human Behavior	4.08	.56
7.	Administration	4.04	.49
8.	Teaching	3.94	.48
9.	Evaluation	3.88	.55

Note. The interpretative scale used contained the following values: Very High Importance = 4.50 -5.00; High Importance = 3.50 - 4.49; Moderate Importance = 2.50 - 3.49; Low Importance = 1.50 - 2.49; and No Importance = 1.00 - 1.49.

Table 33 presents the primary and Appendix D the secondary choices of competency items to be acquired during "CES (Cooperative Extension Service) in-service". Twenty six competency items were primary choices for this level of acquisition. These competency items came from every competency category except Program Execution and Maintaining Professionalism. Sixty three competency items were selected as secondary choices for this level of acquisition. All of the competency categories had competency items selected.

Appendix E shows the primary and Table 34 the secondary choices of competency items to be acquired "on the job". One hundred nine competency items were selected as primary times of acquisition for this level, coming from all of the competency categories. Thirty competency items were selected as secondary times of acquisition for this level. All competency categories except Program Execution and Professionalism were represented.

Table 35 is a summary of the primary and Table 36 the secondary choices of competency items by competency category. Almost four-fifths of the primary times of acquisiton fall into the "on the job" category while the majority of the secondary choices fell into the "CES in-service" category.

Table 30
Respondents' Primary Choice of Competency Items to be Acquired Before Entering the Job

	Competency Item	Competency Category
1.	Compose written communication	Communication
2.	Communicate orally to groups	Communication
3.	Communicate orally to individuals	Communication
4.	Use non-verbal Communications	Communication
5.	Possess listening skills	Communication

Table 31
Respondents' Secondary Choice of Competency Items to be Acquired Before Entering the Job

	Competency Item	Competency Category
1.	Manage time effectively	Administration
2.	Prepare job descriptions	Administration
3.	Present information with a lecture	Teaching
4.	Conduct telephone conversations	Communication
5.	Manage correspondence promptly	Communication

Table 32
Respondents' Secondary Choice of Competency Items to be Acquired During Further Formal Education

	Competency Item	Competency Category
1.	Present information with a lecture	Teaching
2.	Develop survey instruments	Evaluation
3.	Interpret results of survey	Evaluation

Table 33
Respondents' Primary Choice of Competency Items to be Acquired During CES (Cooperative Extension Service) In-Service

	Competency Item	Competency Category
1.	Possess knowledge of the history, philosophy, objectives and organization of the extension service	Administration
2.	Understand how policies are formulated	Administration
3.	Identify policies specific to your area(s) of responsibility	Administration
4.	Identify retirement and insurance policies and procedures	Administration
5.	Explain fringe benefit policy	Administration
6.	Prepare job descriptions	Administration
7.	Determine objective of extension programs	Program Planning
8.	Identify and use principles and procedures in teaching adults and youth	Teaching
9.	Employ principles of learning and teaching	Teaching
10.	Develop instructional materials	Teaching
11.	Design educational exhibits	Teaching
12.	Utilize the computer in teaching	Teaching
13.	Write and/or complete reports	Communication
14.	Prepare and present radio programs	Communication
15.	Prepare and present TV programs	Communication
16.	Prepare newspaper and journal articles	Communication
17.	Use a camera and other photographic equipment	Communication
18.	Apply principles of motivation	Understanding Human Behav.
19.	Identify factors influencing people to become involved	Understanding Human Behav.
20.	Identify functions of agricultural organizations	Understanding Human Behav.
21.	Recognize factors influencing goal setting	Understanding Human Behav.
22.	Apply factors affecting behavior of people	Understanding Human Behav.
23.	Ability to influence people to accept change	Understanding Human Behav.

(table con'd.)

Table 33 Continued
Respondents' Primary Choice of Competency Items to be Acquired During CES (Cooperative Extension Service) In-Service

	Competency Item	Competency Category
23.	Develop survey instruments	Evaluation
24.	Conduct a literature search utilizing computer services	Evaluation
25.	Analyze data using mini-computers	Evaluation
26.	Identify and develop an affirmative action plan dealing with 4-H	4-H Youth

Table 34
Respondents' Secondary Choice of Competency Items to be Acquired On the Job

	Competency Item	Competency Category
1.	Understand how policies are formulated	Administration
2.	Identify policies specific to your area(s) of responsibility	Administration
3.	Identify retirement and insurance policies and procedures	Administration
4.	Explain fringe benefit policy	Administration
5.	Prepare job descriptions	Administration
6.	Determine objectives of extension programs	Program Planning
7.	Employ principles of learning and teaching	Teaching
8.	Develop instructional materials	Teaching
9.	Design educational exhibits	Teaching
10.	Utilize the computer in teaching	Teaching
11.	Compose written communication	Communication
12.	Write and/or complete reports	Communication
13.	Communicate orally to groups	Communication
14.	Communicate orally to individuals	Communication
15.	Use non-verbal Communications	Communication
16.	Possess listening skills	Communication
17.	Prepare and present radio programs	Communication
18.	Prepare and present TV programs	Communication
19.	Prepare newspaper and journal articles	Communication
20.	Use a camera and other photographic equipment	Communication
21.	Apply principles of motivation	Understanding Human Behav.
22.	Identify factors influencing people to become involved	Understanding Human Behav.
23.	Identify functions of agricultural organizations	Understanding Human Behav.
24.	Recognize factors influencing goal setting	Understanding Human Behav.

(table con'd.)

Table 34 Continued
Respondents' Secondary Choice of Competency Items to be Acquired On the Job

	Competency Item	Competency Category
25.	Apply factors affecting behavior of people	Understanding Human Behav.
26.	Ability to influence people to accept change	Understanding Human Behav.
27.	Develop survey instruments	Evaluation
28.	Conduct a literature search utilizing computer services	Evaluation
29.	Analyze data using mini-computers	Evaluation
30.	Identify and develop an affirmative action plan dealing with 4-H	4-H Youth

Table 35
Summary of Respondents' Primary Choice of Competency Acquisition Times by Competency Category

	Time of Acquisition			
	Before Entering Job	Further Formal Education	CES In-service	On the Job
A. Administration	0	0	6	20
B. Program Planning	0	0	1	9
C. Program Execution	0	0	0	12
D. Teaching	0	0	5	15
E. Communication	5	0	5	9
F. Understanding Human Behavior	0	0	6	5
G. Maintaining Professionalism	0	0	0	5
H. Evaluation	0	0	3	15
I. 4-H Youth	0	0	1	19
Total	5	0	26	109
Percent	3.5	0.0	18.6	77.9

Table 36
Summary of Respondents' Secondary Choice of Competency Acquisition Times by Competency Category

	Time of Acquisition			
	Before Entering Job	Further Formal Education	CES In-service	On the Job
A. Administration	2	0	14	5
B. Program Planning	0	0	7	1
C. Program Execution	0	0	2	0
D. Teaching	1	1	10	4
E. Communication	2	0	5	10
F. Understanding Human Behavior	0	0	2	6
G. Maintaining Professionalism	0	0	3	0
H. Evaluation	0	2	13	3
I. 4-H Youth	0	0	7	1
Total	5	3	63	30
Percent	4.9	3.0	62.4	29.7

Supplemental Findings

Additional statistical analyses were done to compare perceptions of Extension agents with regard to mean scores for each professional competency factors (categories) by selected demographic variables .

A t-test was utilized to compare the mean responses of participants over 40 with those participants 40 or younger. As can be seen in Table 37, a significant difference ($p < .05$) was noted for three competency factors: administration; teaching; and maintaining professionalism. For all three factors, Extension agents over 40 rated factor scores in these competency categories higher than did those agents 40 or younger.

Table 37
Comparisons of Competency Factor Scores by Age of Extension Agents

Competency Category	Number of Cases	Mean	t-Value	Probability
Administration				
40 or Younger	60	3.92	-2.73	.007
Over 40	53	4.16		
Teaching				
40 or Younger	58	3.84	-2.36	.020
Over 40	52	4.05		
Maintaining Professionalism				
40 or Younger	59	4.24	-2.31	.023
Over 40	52	4.47		
Program Planning				
40 or Younger	59	4.17	-1.84	.068
Over 40	52	4.34		
Understanding Human Behavior				
40 or Younger	59	4.00	-1.65	.103
Over 40	52	4.17		
Program Execution				
40 or Younger	59	4.19	-1.55	.123
Over 40	52	4.32		
Evaluation				
40 or Younger	59	3.81	-1.55	.124
Over 40	53	3.97		
4-H Youth				
40 or Younger	59	4.08	-0.67	.507
Over 40	53	4.16		
Communication				
40 or Younger	59	4.31	-0.53	.598
Over 40	52	4.36		

The second demographic variable selected was years employed by the Cooperative Extension Service. A t-test was used to compare the mean responses of participants with five years or less experience with participants having greater than five years experience. No significant differences were noted between the two groups as can be seen in Table 38.

Table 38
Comparisons of Competency Factor Scores by Years of Experience of Extension Agents

Competency Category	Number of Cases	Mean	t-Value	Probability
Maintaining Professionalism				
5 Years or Less	26	4.17	-1.92	.061
Greater Than 5 Years	85	4.40		
Teaching				
5 Years or Less	25	3.81	-1.60	.118
Greater Than 5 Years	85	3.97		
Program Execution				
5 Years or Less	26	4.16	-1.27	.211
Greater Than 5 Years	85	4.28		
Understanding Human Behavior				
5 Years or Less	26	3.97	-1.10	.277
Greater Than 5 Years	85	4.11		
Administration				
5 Years or Less	27	3.95	-1.07	.289
Greater Than 5 Years	86	4.06		
Program Planning				
5 Years or Less	26	4.20	-0.58	.562
Greater Than 5 Years	85	4.26		
Evaluation				
5 Years or Less	26	3.83	-0.53	.600
Greater Than 5 Years	86	3.90		
4-H Youth				
5 Years or Less	26	4.14	0.17	.864
Greater Than 5 Years	86	4.11		
Communication				
5 Years or Less	26	4.35	0.18	.857
Greater Than 5 years	85	4.33		

A third t-test was conducted to compare the perceptions of Extension agents that hold only Bachelor's degrees with those that hold Master's Degrees or greater. As can be seen in Table 39, there were no significant differences between the two groups.

Table 39
Comparisons of Competency Factor Scores by Educational Level of Extension Agents

Competency Category	Number of Cases	Mean	t-Value	Probability
Maintaining Professionalism				
Bachelor's Degree	24	4.19	-1.50	.143
Master's or Greater	86	4.38		
Administration				
Bachelor's Degree	25	3.91	-1.41	.165
Master's or Greater	87	4.07		
Understanding Human Behavior				
Bachelor's Degree	24	3.94	-1.21	.236
Master's or Greater	86	4.12		
Teaching				
Bachelor's Degree	23	3.85	-0.99	.329
Master's or Greater	86	3.95		
Program Execution				
Bachelor's Degree	24	4.18	-0.86	.393
Master's or Greater	86	4.26		
Communication				
Bachelor's Degree	24	4.26	-0.83	.411
Master's or Greater	86	4.35		
Evaluation				
Bachelor's Degree	24	3.78	-0.80	.430
Master's or Greater	87	3.90		
Program Planning				
Bachelor's Degree	24	4.21	-0.38	.704
Master's or Greater	86	4.25		
4-H Youth				
Bachelor's Degree	24	4.27	1.74	.088
Master's or Greater	87	4.08		

An analysis of variance was used to compare the mean responses of participants with agriculture, home economics and 4-H as their major areas of assigned responsibility. Where significant F-tests were found, a Tukey's Post Hoc multiple comparison test was used to determine where significant differences existed between the different areas of responsibility. As can be seen in Table 40, the only significant difference occurred between Agriculture and Home Economics

Table 40
Comparisons of Competency Factor Scores by Areas of Assignment of Extension Agents

Competency Category	Means			F-Ratio	F-Prob.
	ANR	Home Ec.	4-H		
Evaluation	4.06[a]	3.85	3.78[a]	3.11	.049
4-H	3.96	4.16	4.22	2.36	.099
Communication	4.23	4.50	4.36	2.21	.115
Program Planning	4.20	4.41	4.23	0.99	.376
Administration	3.98	4.18	4.04	0.99	.377
Program Execution	4.31	4.22	4.21	0.66	.521
Maintaining Professionalism	4.32	4.44	4.32	0.31	.735
Teaching	3.93	3.99	3.93	0.08	.919
Understanding Human Behavior	4.08	4.07	4.09	0.01	.989

[a]Specific groups found to be significantly different by Tukey's Post Hoc Multiple Comparison Test were the Agriculture group and the 4-H group

agents for the competency category evaluation ($F = 3.11$, $p = .049$). Agriculture agents significantly rated competency factor score for this category higher than did 4-H agents.

CHAPTER 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The primary purpose of this study was to identify the professional competencies needed by Cooperative Extension agents in Louisiana as perceived by extension agents. Additional purposes of the study were to identify when the respondents believed the identified competencies should be acquired and to describe the responding agents with regard to selected demographic variables. The perceptions of 117 Louisiana Cooperative Extension agents (90.7 percent of the sample) are the basis for the findings, conclusions and recommendations in this study.

Summary

One-hundred forty-one professional competency items were included in a questionnaire for this study. These competency items were divided into nine categories that included: administration; program planning; program execution; teaching; communication; understanding human behavior; maintaining professionalism; evaluation; and 4-H youth. Participants' responses were divided into two parts for each competency item. The first part was designed to measure the respondents' perceptions as to the importance of each competency statement on a five-point Likert-type scale that included: 1 - no importance; 2 - low importance; 3 - moderate importance; 4 - high importance; and 5 - very high importance. The second part related to the time when the competency should be acquired with four possible responses: 1 - before entering the job; 2 - during further formal education; 3 - Cooperative Extension Service in-service; and 4 - on the job. Demographic data on the questionnaire included: age; highest attained educational level; undergraduate major; if they had previous 4-H experience and if so, how many years; total number of years employed by the Cooperative Extension Service; and major area of assigned responsibility.

The population for this study consisted of extension agents hired by the Louisiana Cooperative Extension Service with at least one year of experience. A minimum random sample of 126 participants was drawn from 292 full-time field Cooperative Extension Personnel (94 County

Agents, 79 Home Economics Agents, and 40 Area Agents) with a 2 percent margin of error. A complete packet that included the questionnaire, cover letter, and self-addressed stamped envelope was mailed to the sample of extension agents selected for this study.

The first objective of the study was to identify the professional competencies needed by extension agents of the Louisiana Cooperative Extension Service. The extension agents in this study rated all of the competency items included in the questionnaire as having at least Moderate Importance using the scale identified in Table 2. Eighteen of the competency items (12.8 percent) were selected to be of Very High Importance. The competency category with the highest number of items selected for this degree of importance was Communication. 4-H Youth, Administration, Program Planning, Program Execution, and Maintaining Professionalism were competency categories that also contained competency items selected of Very High Importance. Fourteen competency items (9.9 percent) from the competency categories Administration, Program Execution, Teaching, Evaluation, and 4-H Youth, were selected as having Moderate Importance. The remaining 109 competency items (77.3 percent) were selected as having High Importance and were contained in all competency categories.

The second objective was to describe extension agents of the Louisiana Cooperative Extension Service with regard to age, highest attained educational level, undergraduate major, number of years as a 4-H member, and total number of years employed by the Cooperative Extension Service. The mean age of respondents for this survey was 40.9 years. Master's degrees were held by 71.7 percent of the respondents and the most common undergraduate major was Home Economics. Of the respondents that had been in 4-H for at least one year (71.9 percent), over half (52.4 percent) had been a 4-H member for either eight or nine years. Three quarters (75.4 percent) of the responding agents had been employed by the Cooperative Extension Service for more than five years. The most common major area of assignment was 4-H as indicated by 48.2 percent of the agents.

The third objective was to identify at what time (i.e. Before entering the job, during further formal education, Cooperative Extension Service in-service, or on the job) these professional competencies should be acquired. The majority of the competency items (109, 77.9 percent) were selected as the primary choice of respondents to be acquired on the job. Sixty three of the professional competency items (62.4 percent) were selected to be acquired during CES in-service as the secondary choice of time of acquisition. None of the professional competencies were selected as primary choices to be acquired during further formal education and before entering the job was selected as the primary choice of agents for only five competency items.

The fourth objective was to determine the importance of professional competency factors (categories). All of the professional competency factors were identified as having High Importance with means ranging from 3.88 to 4.35.

The final objective was to develop an educational content outline for each of the following levels of competency acquisition: before entering the job; during further formal education; CES in-service; and on the job. This educational content outline was based upon the data collected for the third objective and shown in Tables 30 through 34 and Appendices D and E.

Conclusions and Recommendations

The following conclusions and recommendations were based on the responses of the participants in this study with regard to degree of importance and time of acquisition of the 141 professional competencies and selected demographic data:

1. Extension agents perceived that all of the professional competencies were important to their job as an Extension agent in Louisiana.

   This is based on the finding that all of the competency items in this study received a mean score greater than 2.50. This is consistent with the findings reported by Gonzalez (1982).

It is recommended that the results of this study be used by extension administrators, specifically those with the responsibility of designing and implementing in-service education, as a basis for developing in-service educational programs.

2. More agents are employed as 4-H agents than any other area of responsibility.

This is based on the finding that the greatest number of agents (55 or 48.2 percent) of the participants identified 4-H as their major area of responsibility.

This is not consistent with either the Beeman et al. (1979) study or the Gonzalez (1982) study where the majority of extension agents responded that agriculture was their major area of responsibility.

3. The majority of extension agents employed by the Louisiana Cooperative Extension service had been 4-H members as youth.

This is based on the fact that 71.9 percent of the respondents had been in 4-H for at least one year.

This is a much higher percentage than was found in the Gonzalez (1982) study where nearly 41 percent had not been 4-H members or the Beeman et al. (1979) study where 48 percent of the respondents had no previous membership in 4-H.

4. "CES in-service" and "on the job" are preferred times of acquisition for gaining most of the professional competencies needed by extension agents.

This is based on the fact that these two times of acquisition accounted for 96.5 percent of the primary and 92.1 percent of the secondary choices as to time of acquisition.

These numbers are higher that those in the Gonzalez (1982) study but the chosen times of acquisition are consistent between studies.

It is recommended that competency items identified as primary or secondary choices for time of acquisition "on the job" be made available to those in the Extension Service responsible for the training of Extension agents. It is further recommended that competency

items identified as primary or secondary choices for times of acquisition "before entering the job" and "during further formal education" be included in extension education curricula developed by the School of Vocational Education in cooperation with the Louisiana Cooperative Extension Service.

5. The majority of currently employed extension agents had undergraduate majors of either Home Economics or Animal Science.

This is based on the finding that 67 (58.6 percent) of the respondents identified either Home Economics or Animal Science as their undergraduate major.

6. Extension agents in Louisiana identified all of the competency categories (i.e. administration, program planning, program execution, teaching, communication, understanding human behavior, maintaining professionalism, evaluation, and 4-H youth) to be of High Importance in their ability to perform their job.

This is based on the fact that all of the competency factors received an importance rating of High Importance (mean = 4.14 for all competency factors).

This is consistent with the Beeman et al. (1979) study that had a mean of 3.82 for the nine competency factors included in this study.

7. Agents over 40 place higher importance on the competency categories administration, teaching, and maintaining professionalism than do agents 40 or younger.

This is based on the supplemental findings where these categories were found to be significant using t-Tests with $p < .05$. Agents over 40 had significantly higher factor scores for these categories than did those agents 40 or younger.

The Beeman et al. study divided agents into three age categories. The findings are similar in that the low and high age categories had significant differences in the categories research, administration, public relations, and teaching. Age in the Gonzalez study was significant in the categories administration, program planning, and program execution.

8. Agriculture agents place higher importance on the competency category evaluation than do 4-H agents.

This is based on the supplemental findings where agriclutural agents were found to have rated the factor scores higher (mean = 4.06) than did 4-H agents (mean = 3.78) at the $p < .05$ level.

The only significant differences that existed in the Beeman et al. study was for the competency categories research and 4-H. No significant differences were found between assigned areas of responsibility in the Gonzalez study.

Recommendations for Further Study

While there were many similarities between this study and the two previous studies (Beeman et al., 1979 and Gonzalez, 1982) differences also exist. The shifting of importance of competency items is apparent upon comparison. Because of this, it is recommended that this study be replicated every five years in order to provide a basis for modifications in educational programs.

There may have been some misunderstanding between the terms "during further formal education" and "CES in-service". These terms need to be identified clearly in further studies.

It is recommended that the competencies identified for this study be evaluated for significance and social desirability using a Delphi or similar technique to determine if competencies need to be added, combined, or eliminated from the list.

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APPENDIX A

Sample Questionnaire

Professional Competencies Needed by Extension Agents

SECTION 1: Biographic Data

INSTRUCTIONS: Please circle your proper classification under each item or fill in the blank. (Please give only one response per item.)

A. What is your age? _____ Years.

B. What is your highest attained educational level?

(1) Associate Degree
(2) Bachelor's Degree
(3) Master's Degree
(4) Doctoral Degree
(5) Other (specify) _____

C. What was your undergraduate major? Please specify _____

D. Were you were a member of 4-H as a youth? ____Yes ____No

If Yes, for how long? ____Years

E. What is the total number of years you have been employed by the Cooperative Extension Service?

(1) 1-5 years (2) more than 5 years

F. What is your major assigned area of responsibility?

____ANR
____Home Economics
____4-H

SECTION II: Instructions to Questionnaire

Part 1

Each item in the questionnaire states a competency which may or may not be important for the successful operation of the extension program. Please read each statement carefully and circle the number which best expresses your feelings about its importance.

1 - No importance
2 - Low importance
3 - Moderate importance
4 - High importance
5 - Very High importance

Part 2

For each competency, please indicate when you feel the competency should be acquired.

1 - Before entering the job
2 - During further formal education
3 - CES In-Service
4 - On the job

EXAMPLE

Competency	Part 1	Part 2
1. Utilize the computer in teaching	1 2 3 4 5	1 2 3 4

For the competency in the example, the response of a "4" for Part one shows that the respondents believes the competency is of high importance in the operation of a successful extension program. The circled response of "1" for Part 2 indicates that the respondent feels that the competency should be acquired before entering the job.

SECTION II

Professional Competencies

Competency	Degree of importance 1. No importance 2. Low importance 3. Moderate importance 4. High importance 5. Very High importance	When the competency should be acquired 1. Before entering job 2 Further Formal Education 3. CES In-Service 4. On the job
A. Administration - Using a working knowledge of the Cooperative Extension Service philosophy, objectives and procedures		
1. Possess knowledge of the history, philosophy, objectives and organization of the extension service	1 2 3 4 5	1 2 3 4
2. Formulate realistic goals for the extension program	1 2 3 4 5	1 2 3 4
3. Manage work consistent with resources	1 2 3 4 5	1 2 3 4
4. Identify the long-range facility, equipment and supply needs	1 2 3 4 5	1 2 3 4
5. Coordinate use of equipment, facilities and resources with office staff	1 2 3 4 5	1 2 3 4
6. Assist in budget preparation	1 2 3 4 5	1 2 3 4
7. Supervise budget expenditures	1 2 3 4 5	1 2 3 4
8. Manage time effectively	1 2 3 4 5	1 2 3 4
9. Coordinate work schedules of staff	1 2 3 4 5	1 2 3 4
10. Select and supervise personnel	1 2 3 4 5	1 2 3 4
11. Understand how policies are formulated	1 2 3 4 5	1 2 3 4
12. Identify policies specific to your area(s) of responsibility	1 2 3 4 5	1 2 3 4
13. Organize and use staff committees	1 2 3 4 5	1 2 3 4
14. Conduct staff conferences	1 2 3 4 5	1 2 3 4
15. Promote inter-office communications	1 2 3 4 5	1 2 3 4
16. Delegate responsibility and authority	1 2 3 4 5	1 2 3 4
17. Orient new staff members	1 2 3 4 5	1 2 3 4
18. Communicate extension policies and procedures on promotion and salary	1 2 3 4 5	1 2 3 4
19. Identify retirement and insurance policies and procedures	1 2 3 4 5	1 2 3 4
20. Explain fringe benefit policy	1 2 3 4 5	1 2 3 4
21. Provide recognition for staff	1 2 3 4 5	1 2 3 4
22. Maintain staff morale	1 2 3 4 5	1 2 3 4

Competency	Degree ofimportance 1. No importance 2. Low importance 3. Moderate importance 4. High importance 5. Very High importance	When the competency should be acquired 1. Before entering job 2 Further Formal Education 3. CES In-Service 4. On the job
23. Prepare job descriptions	1 2 3 4 5	1 2 3 4
24. Develop leadership potential of staff	1 2 3 4 5	1 2 3 4
25. Analyze personnel records	1 2 3 4 5	1 2 3 4
26. Determine interrelationships of staff roles	1 2 3 4 5	1 2 3 4
B. Program Planning - Designing educational experiences based on clientele needs, interests, and problems		
1. Develop a calendar of activities	1 2 3 4 5	1 2 3 4
2. Determine needs of clientele for extension programs	1 2 3 4 5	1 2 3 4
3. Determine objectives of extension programs	1 2 3 4 5	1 2 3 4
4. Establish program priorities	1 2 3 4 5	1 2 3 4
5. Prepare an annual program of work for your area of responsibility	1 2 3 4 5	1 2 3 4
6. Prepare a long-range program of work	1 2 3 4 5	1 2 3 4
7. Organize and use an advisory committee	1 2 3 4 5	1 2 3 4
8. Involve co-workers and community agencies in program planning	1 2 3 4 5	1 2 3 4
9. Involve specialists and other resource people in program planning	1 2 3 4 5	1 2 3 4
10. Involve extension support groups and clientele traditionally served in program planning	1 2 3 4 5	1 2 3 4
C. Program Execution - Utilizing resources to provide learning experience		
1. Utilize a calendar of activities	1 2 3 4 5	1 2 3 4
2. Follow a written program of work	1 2 3 4 5	1 2 3 4
3. Provide leadership for program planning and execution	1 2 3 4 5	1 2 3 4
4. Develop rapport with clientele	1 2 3 4 5	1 2 3 4
5. Complete LEMIS reports	1 2 3 4 5	1 2 3 4
6. Use a variety of techniques to influence people to change	1 2 3 4 5	1 2 3 4
7. Involve others in executing plans	1 2 3 4 5	1 2 3 4
8. Identify and use early adopters or opinion leaders in extension programs	1 2 3 4 5	1 2 3 4

Competency	Degree of importance 1. No importance 2. Low importance 3. Moderate importance 4. High importance 5. Very High importance	When the competency should be acquired 1. Before entering job 2 Further Formal Education 3. CES In-Service 4. On the job
9. Conduct farm and home visits	1 2 3 4 5	1 2 3 4
10. Select cooperators for trial and result demonstrations	1 2 3 4 5	1 2 3 4
11. Develop problem solving skills in clientele	1 2 3 4 5	1 2 3 4
12. Conduct result demonstrations	1 2 3 4 5	1 2 3 4
D. Teaching - Facilitating the learning experiences of extension clients		
1. Identify and use principles and procedures in teaching adults and youth	1 2 3 4 5	1 2 3 4
2. Employ principles of learning and teaching	1 2 3 4 5	1 2 3 4
3. Develop instructional materials	1 2 3 4 5	1 2 3 4
4. Select instructional materials	1 2 3 4 5	1 2 3 4
5. Select non-formal teaching methods and techniques for particular situations	1 2 3 4 5	1 2 3 4
6. Present information with a lecture	1 2 3 4 5	1 2 3 4
7. Present a concept, principle or skill through the demonstration method	1 2 3 4 5	1 2 3 4
8. Present information with the assistance of resource persons	1 2 3 4 5	1 2 3 4
9. Present information with slides	1 2 3 4 5	1 2 3 4
10. Present information with sound motion pictures	1 2 3 4 5	1 2 3 4
11. Present information with televised and video-taped materials	1 2 3 4 5	1 2 3 4
12. Present information with charts	1 2 3 4 5	1 2 3 4
13. Present information with a chalkboard	1 2 3 4 5	1 2 3 4
14. Conduct group discussions, panel discussions, symposiums and other group dynamics techniques	1 2 3 4 5	1 2 3 4
15. Design educational exhibits	1 2 3 4 5	1 2 3 4
16. Employ reinforcement techniques	1 2 3 4 5	1 2 3 4
17. Employ the problem solving approach in teaching	1 2 3 4 5	1 2 3 4
18. Employ questioning techniques	1 2 3 4 5	1 2 3 4
19. Plan, organize and conduct tours and field trips	1 2 3 4 5	1 2 3 4
20. Utilize the computer in teaching	1 2 3 4 5	1 2 3 4

Competency	Degree of importance 1. No importance 2. Low importance 3. Moderate importance 4. High importance 5. Very High importance	When the competency should be acquired 1. Before entering job 2 Further Formal Education 3. CES In-Service 4. On the job
E. Communication - Informing staff and extension clientele of the images, accomplishments, and purposes of the program		
1. Conduct telephone conversations	1 2 3 4 5	1 2 3 4
2. Establish communications among members of the extension staff	1 2 3 4 5	1 2 3 4
3. Compose written communication	1 2 3 4 5	1 2 3 4
4. Write and/or complete reports	1 2 3 4 5	1 2 3 4
5. Communicate orally to groups	1 2 3 4 5	1 2 3 4
6. Communicate orally to individuals	1 2 3 4 5	1 2 3 4
7. Use non-verbal Communications	1 2 3 4 5	1 2 3 4
8. Possess listening skills	1 2 3 4 5	1 2 3 4
9. Prepare and present radio programs	1 2 3 4 5	1 2 3 4
10. Prepare and present TV programs	1 2 3 4 5	1 2 3 4
11. Prepare newspaper and journal articles	1 2 3 4 5	1 2 3 4
12. Manage correspondence promptly	1 2 3 4 5	1 2 3 4
13. Provide recognition for accomplishment	1 2 3 4 5	1 2 3 4
14. Deal with complaints	1 2 3 4 5	1 2 3 4
15. Promote effective working relationships with the mass media	1 2 3 4 5	1 2 3 4
16. Establish rapport with organizations and agencies	1 2 3 4 5	1 2 3 4
17. Publicize activities through appropriate channels	1 2 3 4 5	1 2 3 4
18. Use a camera and other photographic equipment	1 2 3 4 5	1 2 3 4
19. Foster supportive relationships with appropriate agencies, organizations and individuals	1 2 3 4 5	1 2 3 4
F. Understanding Human Behavior		
1. Apply principles of motivation	1 2 3 4 5	1 2 3 4
2. Identify factors influencing people to become involved	1 2 3 4 5	1 2 3 4
3. Identify functions of agricultural organizations	1 2 3 4 5	1 2 3 4
4. Determine the effect of pressure groups on the thinking process	1 2 3 4 5	1 2 3 4
5. Recognize factors influencing goal setting	1 2 3 4 5	1 2 3 4

Competency	Degree of importance 1. No importance 2. Low importance 3. Moderate importance 4. High importance 5. Very High importance	When the competency should be acquired 1. Before entering job 2 Further Formal Education 3. CES In-Service 4. On the job
6. Apply factors affecting behavior of people	1 2 3 4 5	1 2 3 4
7. Ability to influence people to accept change	1 2 3 4 5	1 2 3 4
8. Analyze the power structure within the community	1 2 3 4 5	1 2 3 4
9. Identify pressure groups within the community	1 2 3 4 5	1 2 3 4
10. Utilize knowledge of interaction of people in groups	1 2 3 4 5	1 2 3 4
11. Utilize the pattern of interdependence of the various groups in the county to cause change	1 2 3 4 5	1 2 3 4
G. Maintaining Professionalism		
1. Identify opportunities for professional improvement	1 2 3 4 5	1 2 3 4
2. Develop a plan for professional development	1 2 3 4 5	1 2 3 4
3. Maintain professional competency	1 2 3 4 5	1 2 3 4
4. Establish and maintain a professional philosophy	1 2 3 4 5	1 2 3 4
5. Participate in professional organizations and activities	1 2 3 4 5	1 2 3 4
H. Evaluation - Collecting, analyzing and interpreting information to determine the strengths and weaknesses of a program		
1. Evaluate the effectiveness of a parish or multi-parish extension program	1 2 3 4 5	1 2 3 4
2. Evaluate your performance as an extension agent	1 2 3 4 5	1 2 3 4
3. Evaluate the performance of the extension staff	1 2 3 4 5	1 2 3 4
4. Interpret the impact of change and/or trends upon clientele served	1 2 3 4 5	1 2 3 4
5. Develop survey instruments	1 2 3 4 5	1 2 3 4
6. Conduct surveys	1 2 3 4 5	1 2 3 4
7. Interpret results of survey	1 2 3 4 5	1 2 3 4
8. Analyze reports	1 2 3 4 5	1 2 3 4
9. Evaluate results of an extension event or activity	1 2 3 4 5	1 2 3 4
10. Interpret research findings	1 2 3 4 5	1 2 3 4
11. Apply research findings when making recommendations to clientele	1 2 3 4 5	1 2 3 4
12. Use the experimental approach (research trials or demonstration plots) in extension work	1 2 3 4 5	1 2 3 4

Competency	Degree ofimportance 1. No importance 2. Low importance 3. Moderate importance 4. High importance 5. Very High importance	When the competency should be acquired 1. Before entering job 2 Further Formal Education 3. CES In-Service 4. On the job
13. Cooperate with experiment station and university research facility	1 2 3 4 5	1 2 3 4
14. Identify problems requiring additional research	1 2 3 4 5	1 2 3 4
15. Keep current in research findings	1 2 3 4 5	1 2 3 4
16. Conduct a literature search utilizing library resources without the aid of a computer	1 2 3 4 5	1 2 3 4
17. Conduct a literature search utilizing computer services	1 2 3 4 5	1 2 3 4
18. Analyze data using mini-computers	1 2 3 4 5	1 2 3 4
I. 4-H Youth		
1. Organize a parish 4-H foundation committee	1 2 3 4 5	1 2 3 4
2. Establish criteria for selecting adult and teen 4-H volunteer leaders	1 2 3 4 5	1 2 3 4
3. Recruit and train volunteer 4-H leaders	1 2 3 4 5	1 2 3 4
4. Develop a constitution and by-laws for county 4-H program	1 2 3 4 5	1 2 3 4
5. Identify and develop an affirmative action plan dealing with 4-H	1 2 3 4 5	1 2 3 4
6. Coordinate 4-H programs with other extension programs	1 2 3 4 5	1 2 3 4
7. Develop 4-H annual plans of work	1 2 3 4 5	1 2 3 4
8. Assist volunteer leaders in organizing 4-H clubs	1 2 3 4 5	1 2 3 4
9. Obtain parental interest, cooperation and involvement in 4-H activities	1 2 3 4 5	1 2 3 4
10. Coordinate 4-H contests and awards programs	1 2 3 4 5	1 2 3 4
11. Provide officer training for 4-H officers	1 2 3 4 5	1 2 3 4
12. Organize 4-H clubs	1 2 3 4 5	1 2 3 4
13. Coordinate activities of other youth related organizations	1 2 3 4 5	1 2 3 4
14. Coordinate activities of other parish professional personnel with 4-H responsibilities	1 2 3 4 5	1 2 3 4
15. Coordinate activities of all volunteer 4-H leaders	1 2 3 4 5	1 2 3 4
16. Guide work of all volunteer 4-H leaders	1 2 3 4 5	1 2 3 4
17. Evaluate progress and development of 4-H members	1 2 3 4 5	1 2 3 4

Competency	Degree of importance 1. No importance 2. Low importance 3. Moderate importance 4. High importance 5. Very High importance	When the competency should be acquired 1. Before entering job 2 Further Formal Education 3. CES In-Service 4. On the job
18. Identify the importance and uses of youth camps and the 4-H program	1 2 3 4 5	1 2 3 4
19. Maintain a working relationship among volunteer 4-H staff	1 2 3 4 5	1 2 3 4
20. Solicit contributions for parish 4-H programs	1 2 3 4 5	1 2 3 4
J. **Directions: List any additional competencies that you believe are important but have not been included on this survey instrument and rate those competencies**		
1. _____	1 2 3 4 5	1 2 3 4
2. _____	1 2 3 4 5	1 2 3 4
3. _____	1 2 3 4 5	1 2 3 4
4. _____	1 2 3 4 5	1 2 3 4

Please return completed questionnaire to:

Blaine Reynolds
School of Vocational Education
Louisiana State University
Baton Rouge, LA 70803

APPENDIX B

Initial Cover Letter

June 21, 1993

Dear 1~:

Dramatic changes have occurred in the Extension Service over the last twenty years. Changes that include the increased use of computers, expanded clientele, budget cuts, and new programs, have altered and increased the competencies that are needed by Extension agents in the performance of their job. A study is currently underway at LSU that has as its purpose identifying the competencies needed by Extension agents in the performance of their jobs and at what time these competencies should be acquired. The results of this study will provide the foundation for developing and updating educational programs, curricula, in-service programs, and opportunities for Extension agents in Louisiana.

You are one of a small group of Extension agents selected at random from all Extension agents in Louisiana that are being asked about their perceptions of competencies needed in their job. In order to accurately represent the thinking of all Extension agents in Louisiana, it is important that each questionnaire be completed and returned. On the enclosed questionnaire you will find a list of professional competencies that may be needed in order to adequately perform your role as an Extension agent. In addition to knowing your perceptions of the relative importance of each competency, we would like to know your perception as to when the competency should be acquired.

Please be advised that your participation in this study is voluntary and that your response will be kept confidential. Identification numbers are to be used to follow up on questionnaires that are not returned. Your name will never be placed on the questionnaire. If you do not wish to participate, simply return the blank questionnaire.

A self-addressed, stamped envelope is enclosed for your convenience in returning the questionnaire. Please complete and return the questionnaire by July 7, 1993. I would be most happy to answer any questions you might have. Please contact me at (504) 261-3852. If I'm not in, leave your name and number and I'll return your call as soon as possible.

Thank you for your time, cooperation and assistance.

Sincerely,

Blaine Reynolds
Research Assistant
School of Voc. Ed.

Michael F. Burnett
Professor
School of Voc. Ed.

APPENDIX C

Follow-up Letter

July 17, 1993

Dear 1~:

Several weeks ago you received a letter asking you to participate in a study that has as its purpose identifying the competencies needed by Extension agents in the performance of their jobs and at what time these competencies should be acquired. The results of this study will provide the foundation for developing and updating educational programs, curricula, in-service programs, and opportunities for Extension agents in Louisiana.

Because you are one of a small group of Extension agents selected at random from all Extension agents in Louisiana, it is important that all questionnaires are returned to more accurately represent the thinking of all Extension agents in Louisiana. If for any reason you do not wish to participate, simply return the blank questionnaire.

Please be advised that your participation in this study is voluntary and that your response will be kept confidential. Identification numbers are to be used to follow up on questionnaires that are not returned. Your name will never be placed on the questionnaire.

A self-addressed, stamped envelope is enclosed for your convenience in returning the questionnaire. Please complete and return the questionnaire as soon as possible.

Thank you again for your time and assistance.

Sincerely,

Blaine Reynolds
Research Assistant
School of Voc. Ed.

Michael F. Burnett
Professor
School of Voc. Ed.

APPENDIX D

Respondents' Secondary Choice of Competency Items to be Acquired During CES (Cooperative Extension Service) In-Service

Respondents' Secondary Choice of Competency Items to be Acquired During CES (Cooperative Extension Service) In-Service

Competency Item	Competency Category
1. Formulate realistic goals for the extension program	Administration
2. Manage work consistent with resources	Administration
3. Assist in budget preparation	Administration
4. Manage time effectively	Administration
5. Select and supervise personnel	Administration
6. Organize and use staff committees	Administration
7. Conduct staff conferences	Administration
8. Delegate responsibility and authority	Administration
9. Orient new staff members	Administration
10. Communicate extension policies and procedures on promotion and salary	Administration
11. Provide recognition for staff	Administration
12. Develop leadership potential of staff	Administration
13. Analyze personnel records	Administration
14. Determine interrelationships of staff roles	Administration
15. Determine needs of clientele for extension programs	Program Planning
16. Establish program priorities	Program Planning
17. Prepare an annual program of work for your area of responsibility	Program Planning
18. Prepare a long-range program of work	Program Planning
19. Organize and use an advisory committee	Program Planning
20. Involve specialists and other resource people in program planning	Program Planning
21. Involve extension support groups and clientele traditionally served in program planning	Program Planning

(table con'd.)

Continued
Respondents' Secondary Choice of Competency Items to be Acquired During CES (Cooperative Extension Service) In-Service

Competency Item	Competency Category
22. Provide leadership for program planning and execution	Program Execution
23. Complete LEMIS reports	Program Execution
24. Select instructional materials	Teaching
25. Select non-formal teaching methods and techniques for particular situations	Teaching
26. Present a concept, principle or skill through the demonstration method	Teaching
27. Present information with the assistance of resource persons	Teaching
28. Conduct group discussions, panel discussions, symposiums, and other group dynamics techniques	Teaching
29. Employ reinforcement techniques	Teaching
30. Employ the problem solving approach in teaching	Teaching
31. Employ questioning techniques	Teaching
32. Plan, organize and conduct tours and field trips	Teaching
33. Utilize the computer in teaching	Teaching
34. Deal with complaints	Communication
35. Promote effective working relationships with the mass media	Communication
36. Establish rapport with organizations and agencies	Communication
37. Publicize activities through appropriate channels	Communication
38. Foster supportive relationships with appropriate agencies, organizations and individuals	Communication
39. Determine the effect of pressure groups on the thinking process	Understanding Human Behav.
40. Utilize knowledge of interaction of people in groups	Understanding Human Behav.
41. Identify opportunities for professional improvement	Maint. Professionalism

(table con'd.)

Continued
Respondents' Secondary Choice of Competency Items to be Acquired During CES (Cooperative Extension Service) In-Service

Competency Item	Competency Category
42. Develop a plan for professional development	Maint. Professionalism
43. Maintain professional competency	Maint. Professionalism
44. Evaluate the effectiveness of a parish or multi-parish extension program	Evaluation
45. Evaluate the performance of the extension staff	Evaluation
46. Interpret the impact of change and/or trends upon clientele served	Evaluation
47. Conduct Surveys	Evaluation
48. Interpret results of survey	Evaluation
49. Analyze reports	Evaluation
50. Evaluate results of an extension event or activity	Evaluation
51. Interpret research findings	Evaluation
52. Apply research findings when making recommendations to clientele	Evaluation
53. Use the experimental approach (research trials or demonstration plots) in extension work	Evaluation
54. Cooperate with experiment station and university research facility	Evaluation
55. Identify problems requiring additional research	Evaluation
56. Keep current in research findings	Evaluation
57. Organize a parish 4-H foundation Committee	4-H Youth
58. Establish criteria for selecting adult and teen 4-H volunteer leaders	4-H Youth
59. Recruit and train volunteer 4-H leaders	4-H Youth
60. Develop a constitution and by-laws for county 4-H program	4-H Youth

(table con'd.)

Continued

Respondents' Secondary Choice of Competency Items to be Acquired During CES (Cooperative Extension Service) In-Service

Competency Item	Competency Category
61. Develop 4-H annual plans of work	4-H Youth
62. Provide officer training for 4-H officers	4-H Youth
63. Identify the importance and uses of youth camps and the 4-H program	4-H Youth

APPENDIX E

Respondents Primary Choice of Competency Items to be Acquired on the Job

Respondents' Primary Choice of Competency Items to be Acquired On the Job

Competency Item	Competency Category
1. Formulate realistic goals for the extension program	Administration
2. Manage work consistent with resources	Administration
3. Identify the long-range facility, equipment and supply needs	Administration
4. Coordinate use of equipment, facilities and resources with office staff	Administration
5. Assist in budget preparation	Administration
6. Supervise budget expenditures	Administration
7. Manage time effectively	Administration
8. Coordinate work schedules of staff	Administration
9. Select and supervise personnel	Administration
10. Organize and use staff committees	Administration
11. Conduct staff conferences	Administration
12. Promote inter-office communications	Administration
13. Delegate responsibility and authority	Administration
14. Orient new staff members	Administration
15. Communicate extension policies and procedures on promotion and salary	Administration
16. Provide recognition for staff	Administration
17. Maintain staff morale	Administration
18. Develop leadership potential of staff	Administration
19. Analyze personnel records	Administration
20. Determine interrelationships of staff roles	Administration
21. Develop a calendar of activities	Program Planning
22. Determine needs of clientele for extension programs	Program Planning

(table con'd.)

Continued
Respondents' Primary Choice of Competency Items to be Acquired On the Job

Competency Item	Competency Category
23. Establish program priorities	Program Planning
24. Prepare an annual program of work for your area of responsibility	Program Planning
25. Prepare a long-range program of work	Program Planning
26. Organize and use an advisory committee	Program Planning
27. Involve co-workers and community agencies in program planning	Program Planning
28. Involve specialists and other resource people in program planning	Program Planning
29. Involve extension support groups and clientele traditionally served in program planning	Program Planning
30. Utilize a calendar of activities	Program Execution
31. Follow a written program of work	Program Execution
32. Provide leadership for program planning and execution	Program Execution
33. Develop rapport with clientele	Program Execution
34. Complete LEMIS reports	Program Execution
35. Use a variety of techniques to influence people to change	Program Execution
36. Involve others in executing plans	Program Execution
37. Identify and use early adopters or opinion leaders in extension programs	Program Execution
38. Conduct farm and home visits	Program Execution
39. Select cooperators for trial and result demonstrations	Program Execution
40. Develop problem solving skills in clientele	Program Execution
41. Conduct result demonstrations	Program Execution
42. Select instructional materials	Teaching
43. Select non-formal teaching methods and techniques for particular situations	Teaching

(table con'd.)

Continued
Respondents' Primary Choice of Competency Items to be Acquired On the Job

Competency Item	Competency Category
44. Present information with a lecture	Teaching
45. Present a concept, principle or skill through the demonstration method	Teaching
46. Present information with the assistance of resource persons	Teaching
47. Present information with slides	Teaching
48. Present information with sound motion pictures	Teaching
49. Present information with televised and video-taped materials	Teaching
50. Present information with charts	Teaching
51. Present information with a chalkboard	Teaching
52. Conduct group discussions, panel discussions, symposiums and other group dynamics techniques	Teaching
53. Employ reinforcement techniques	Teaching
54. Employ the problem solving approach in teaching	Teaching
55. Employ questioning techniques	Teaching
56. Plan, organize and conduct tours and field trips	Teaching
57. Conduct telephone conversations	Communication
58. Establish communications among members of the extension staff	Communication
59. Manage correspondence promptly	Communication
60. Provide recognition for accomplishment	Communication
61. Deal with complaints	Communication
62. Promote effective working relationships with the mass media	Communication
63. Establish rapport with organizations and agencies	Communication
64. Publicize activities through appropriate channels	Communication

(table con'd.)

Continued
Respondents' Primary Choice of Competency Items to be Acquired On the Job

Competency Item	Competency Category
65. Foster supportive relationships with appropriate agencies, organizations and individuals	Communication
66. Determine the effect of pressure groups on the thinking process	Understanding Human Behav.
67. Analyze the power structure within the community	Understanding Human Behav.
68. Identify pressure groups within the community	Understanding Human Behav.
69. Utilize knowledge of interaction of people in groups	Understanding Human Behav.
70. Utilize the pattern of interdependence of the various groups in the county to cause change	Understanding Human Behav.
71. Identify opportunities for professional improvement	Maintaining Professionalism
72. Develop a plan for professional development	Maintaining Professionalism
73. Maintain professional competency	Maintaining Professionalism
74. Establish and maintain a professional philosophy	Maintaining Professionalism
75. Participate in professional organizations and activities	Maintaining Professionalism
76. Evaluate the effectiveness of a parish or multi-parish extension program	Evaluation
77. Evaluate your performance as an extension agent	Evaluation
78. Evaluate the performance of the extension staff	Evaluation
79. Interpret the impact of change and/or trends upon clientele served	Evaluation
80. Conduct surveys	Evaluation
81. Interpret results of survey	Evaluation
82. Analyze reports	Evaluation
83. Evaluate results of an extension event or activity	Evaluation
84. Interpret research findings	Evaluation
85. Apply research findings when making recommendations to clientele	Evaluation

(table con'd.)

Continued
Respondents' Primary Choice of Competency Items to be Acquired On the Job

	Competency Item	Competency Category
86.	Use the experimental approach (research trials or demonstration plots) in extension work	Evaluation
87.	Cooperate with experiment station and university research facility	Evaluation
88.	Identify problems requiring additional research	Evaluation
89.	Keep current in research findings	Evaluation
90.	Conduct a literature search utilizing library resources without the aid of a computer	Evaluation
91.	Organize a parish 4-H foundation committee	4-H Youth
92.	Establish criteria for selecting adult and teen 4-H volunteer leaders	4-H Youth
93.	Recruit and train volunteer 4-H leaders	4-H Youth
94.	Develop a constitution and by-laws for county 4-H program	4-H Youth
95.	Coordinate 4-H programs with other extension programs	4-H Youth
96.	Develop 4-H annual plans of work	4-H Youth
97.	Assist volunteer leaders in organizing 4-H clubs	4-H Youth
98.	Obtain parental interest, cooperation and involvement in 4-H activities	4-H Youth
99.	Coordinate 4-H contests and awards programs	4-H Youth
100.	Provide officer training for 4-H officers	4-H Youth
101.	Organize 4-H clubs	4-H Youth
102.	Coordinate activities of other youth related organizations	4-H Youth
103.	Coordinate activities of other parish professional personnel with 4-H responsibilities	4-H Youth
104.	Coordinate activities of all volunteer 4-H leaders	4-H Youth
105.	Guide work of all volunteer 4-H leaders	4-H Youth
106.	Evaluate progress and development of 4-H members	4-H Youth

(table con'd.)

Continued
Respondents' Primary Choice of Competency Items to be Acquired On the Job

	Competency Item	Competency Category
107.	Identify the importance and uses of youth camps and the 4-H program	4-H Youth
108.	Maintain a working relationship among volunteer 4-H staff	4-H Youth
109.	Solicit contributions for parish 4-H programs	4-H Youth

VITA

William Blaine Reynolds was born on January 8, 1958, in Chicago, Illinois. He is the son of O. Blaine and Dr. Mary Firestone Reynolds.

Blaine graduated from Clay High School, Green Cove Springs, Florida, in 1976. He received his Bachelor of Science in Agriculture degree in food and resource economics from the College of Agriculture, University of Florida, in 1982.

From 1982 to 1984 he was a United States Peace Corps Volunteer stationed on the island of Bohol in the Philippines.

When he returned home, he taught vocational agriculture at Middleburg High School, Middleburg, Florida, for one year.

In 1986, Blaine became a County Extension Agent, 4-H and Animal Science, for the Florida Cooperative Extension Service, working in Clay County, Florida. After two years he decided to pursue his education full-time and received his Master's of Science in Agriculture degree in agricultural and extension education from the College of Agriculture, University of Florida, in 1990.

Blaine then moved to Baton Rouge, Louisiana where he completed his Doctor of Philosophy degree in vocational education, College of Agriculture, Louisiana State University, in 1993.

Blaine is currently living in Lake County, Florida, with his wife, Lori, and three children, Emily, Tripp, and Nicholas, where he is working at a Vocational Education Center.

DOCTORAL EXAMINATION AND DISSERTATION REPORT

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Major Field: Vocational Education

Title of Dissertation: Professional Competencies Needed by Extension Agents in the Louisiana Cooperative Extension Service

Approved:

Michael F. Burnett

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EXAMINING COMMITTEE:

Date of Examination:

November 1, 1993